ARCTIC PARADOX: POLAR BEARS, CLIMATE CHANGE AND AMERICAN ENVIRONMENTALISM

By

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ABSTRACT

By virtually any standard of measurement, the Arctic is hotter than ever before, physically, politically and emotionally. Rising ocean temperatures, opening sea lanes, disappearing pack ice and global fear of environmental devastation have combined to make the Arctic Ocean the great question mark about the future of the human species with *ursus maritimus*, the "sea bear," standing as perhaps the most evocative symbol of our global responsibility and fate.

In human eyes the polar bear has long been a paradoxical creature, mirroring a dilemma at the center of America's relationship to the Arctic today. The region's stretches of uninterrupted ecosystems and wilderness areas inspire strikingly disparate visions: a resource warehouse to some, and a sacred environmental preserve to others, pitting historical frontier identities against moral obligations to future generations. These conflicting visions of the Arctic ice pack and the bears who live there also symbolize the tension between the realities of consumerism and the ideals of global citizenship. In the last 150 years, our understanding of the polar bear has transitioned from ferocious to vulnerable, from a symbol of cold to a symbol of melt. An analysis of this change illuminates shifting historical perspectives and the roots of this ideological divide.

This thesis demonstrates how polar bears first entered the American public consciousness as ferocious and sublime Arctic predators, before being commercialized, commodified, and eventually codified into the symbols they are today. Applied discourse analysis deconstructs how industrialization mediated the cultural shift of the polar bear from feared predator to vulnerable and politically contentious climate victim. Images and image analysis support the historical narrative, and act as entry points to our historic and contemporary understandings of American environmentalism.

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INTRODUCTION

In December 2017, the *National Geographic* photographer and outspoken environmental activist Paul Nicklen shared via social media outlets a series of original photographs and videos of an emaciated polar bear making its way across brown, snowless tundra.[1] The imagery went viral, shared by thousands of sympathetic individuals and organizations with similar ideological alignments. The images of starvation and seeming desperation elicited strong and often emotional responses from viewers. Never mind that we as viewers do not know the history of this bear, its age or its health – starvation is the leading cause of death for geriatric polar bears.[2] Are we witnessing nature take its course, or something far more sinister by our own hand? Nicklen's images speak directly to the contemporary environmental discourse and questions surrounding humanity's role in the diminishing sea ice upon which polar bears depend, and whether these apex predators are dying as a result of our consumption. Herein lies the power of images—a single series of polar bear photographs embodies an entire social, cultural, and political narrative.

Nicklen, like many environmentalists, recognizes the deeply symbolic meaning that the polar bear has achieved in the early twenty-first century and its ability to generate powerful feelings of empathy and guilt about the complex and often invisible challenge of climate change. The timing and reception of Nicklen's sensational images are no accident; they reflect a carefully crafted and powerful response to actions taken by the Trump administration to open the Arctic National Wildlife Refuge (ANWR), the American Arctic ocean, and other protected lands to oil and gas exploration and drilling. Politically tinged and pointed, Nicklen's images implicate actions taken by the current administration

[1] The video can be found on Paul Nicklen's Instagram account: https://www.instagram.com/p/BcU-6PsAoIp/?taken-by=paulnicklen.
[2] Ian Stirling, *Polar Bears* (Ann Arbor: The University of Michigan Press, 1988).

(and our complicity therein) for the suffering of the bear, climate change, and ultimately our own uncertain future.

The Arctic region itself now symbolizes the tensions between economic development and environmental protection—that is, the tension between our identities as global consumers and global citizens. Global industrialization powered by fossil fuels generates unprecedented wealth and opportunity and continues to reduce world poverty rates. It increases accessibility to products and services in the most remote corners of the world, including the Arctic. A local resident of Utqiagvik (formerly Barrow), AK can buy bananas at a local grocery year-round.

Simultaneously, however, industrial pollutants including Polychlorinated biphenyl (PCBs), Dichlorodiphenyltrichloroethane (DDT), organochlorine pesticides, and persistent organic pollutants (POPs)—produced thousands of miles from the Arctic—make their way via the jet stream to cold northern climes where they fall to the ground and enter the food web. Arctic inhabitants near the top of the food chain, both human and animal, now suffer from high concentrations of these toxins in their tissues.[3] Accelerated climate warming disproportionally affects the Arctic environment, reducing the sea ice and associated habitat upon which both animals and humans rely. While the Arctic appears removed from the vast majority of the world's population, the rest of the world continually alters and threatens the Arctic.

As vocal scientists draw public attention to the warming climate, the polar bear has emerged as the vulnerable victim of the industrialized world. The bear provides an empathetic face to the imbalance of influence, an effective messenger for stakeholders looking to communicate the impacts of global climate change. Emotional images of suffering polar bears widely circulated by print and digital media have raised concerns among Americans about the survival of this iconic species and the loss of its ice-bound habitat. Massive marketing campaigns by environmental stakeholders have led

[3] Marla Cone, *Silent Snow: The Slow Poisoning of the Arctic* (New York: Grove Press, 2005).

many twenty-first century viewers of such images to see their own future in the face of the bear, acutely aware that their participation in the industrialized world has far reaching global impacts for both the bear and the whole of humanity. Why do these images of polar bears resonate so deeply? What do they reveal about America's relationship to the environment and the political implications of that relationship?

To answer these questions, this thesis will look back 150 years to the nineteenth century—the golden age of Arctic exploration, when the Arctic, and therefore the polar bear, first entered the American public's imagination. Images of the Arctic entered households across the country by way of illustrated newspapers, magazines, dime novels, and the harrowing published accounts of Arctic explorers. Within these pages, the visual beauty and terror arising from the darkness and obscurity that came to define the aesthetic known as the Arctic sublime, and the fierce wild animals therein, enthralled American viewers. Comparing today's images of the polar bear with those from throughout the last 150 years reveals the emergence of a new Arctic sublime proportionate to the ominous threat of global climate change—one that captivates viewers with the same terror and awe experienced by our Victorian predecessors but that communicates a strikingly different message.

Today's images of the bear ask contemporary audiences to examine our mortality in the presence of indomitable nature; only now, the role of antagonizer has been reversed. The suffering and potential ultimate demise of the bear implicate humanity, and through the bear's suffering viewers confront their own potential fate wrought not by the divine but by their own hand. The visual script of the sublime has flipped: God proposes, man disposes.[4]

This thesis will demonstrate how polar bears first entered the American public consciousness as ferocious and sublime Arctic predators, before being commercialized and industrialized,

[4] In contrast to the title of Edwin Landseer's nineteenth-century painting of a polar bear feasting on the remains of perished Arctic explorers, titled *Man Proposes, God Disposes.*

commodified, quantified, and eventually codified into the symbols they are today. A close examination of this transition will demonstrate that nineteenth and twentieth century industrialization precipitated environmental sentiments in the United States and mediated the shift of the polar bear from feared predator to vulnerable and politically contentious climate victim. Applied discourse analysis deconstructs the cultural and historical symbolism of the polar bear. Images and image analysis will support this historical narrative, acting as entry points to our historic and contemporary understandings of American environmentalism.

Chapter one includes a discussion of my theoretical framework, methodology, and limitations. Chapter two recounts the polar bear's entry into the American consciousness in the golden age of Arctic exploration, tracks the bear's cultural and commercial use throughout industrialization and post-war America, and argues that science, technology and the environmental movement in the late twentieth century fundamentally changed how Americans related to the bear. Chapter three builds upon chapter two, analyzing twenty-first century perspectives of the polar bear, its use to apply political leverage, and its charismatic but contentious reputation in shaping public opinion and consumer behavior.

CHAPTER ONE
Theory,[1] Methodology, and Limitations

Theory

In the twenty-first century, more and more visual content is created, curated, shared, and consumed than ever before. Consumers' capacity to scrutinize meaning, context, and agenda is increasingly important as digital technology grows in sophistication and accessibility. Reviewing the historical narrative and familiarizing the reader with previous perceptions of the polar bear in popular culture illuminates what historical changes in human-animal relationships say about American environmental thought and politics. More broadly the story of the polar bear reveals that the powerful visual narratives so omnipresent in modern life may not be as straightforward or transparent as they appear.

This interdisciplinary endeavor draws upon history, visual culture, art historical theory, environmental history, and philosophy, as well as communications and marketing. The works of critic John Berger, scholars such as Susan Sontag and American environmental historian William Cronon, and French philosopher and semiotician Roland Barthes have all provided valuable theoretical frameworks to decipher the polar bear's meaning in American culture today.

Narratives and stories are integral to the human experience. "In the beginning was the story," as historian William Cronon once wrote. "Or rather: many stories, of many places, in many voices, pointing toward many ends."[2] Stories help us derive meaning and purpose from life's otherwise random and seemingly chaotic events. Stories describe relationships and orient us in communities,

[1] Rather than including a formal literature review in this chapter, I have treated the works of the primary theorists who have guided my theoretical approach here. Throughout subsequent chapters I have acknowledged and interwoven the many other literary works that have informed my analysis.
[2] William Cronon, "A Place for Stories: Nature, History, and Narrative," *The Journal of American History* 78, no. 4 (1992): 1347.

societies, cultures, and environments. How those relationships are defined within a story ultimately determines the meaning and the outcome of the story— that is, their definitions determine how we see and interpret the world around us.

Images, like stories, serve to orient us in the surrounding world. Images also impart ideas, relationships and ideologies and play an essential role in storytelling. Images can convey—in a single scene—the complex cultural contexts, histories, understandings, and misunderstandings of their maker. This particular quality causes images to be inherently narrative—they reflect a carefully selected presentation and representation. What details are included or emphasized? What details are omitted? A single image can convey thousands of stories at a single glance. As renowned art critic and author John Berger explains in the opening to his 1972 book and TV series *Ways of Seeing*: "Seeing comes before words. The child looks and recognizes before it can speak. But there is also another sense in which seeing comes before words. It is seeing which establishes our place in the surrounding world..."[3] Author and Art Historian W.J.T Mitchell's work on imagery tells us more about this relationship between what we see and what we know. The word 'idea' derives from the Greek verb meaning 'to see'—an etymology that reminds us that the way that we think about thinking is guided by a visual standard in Western culture. In this sense, according to Mitchell, looking, seeing, and knowing have become perilously intertwined.[4] Berger concisely articulates this relationship between seeing and knowing: "The way we see things is affected by what we know or what we believe [...] We never look at just one thing; we are always looking at the relation between things and ourselves. Our vision is continually active, continually moving, continually holding things in a circle around itself, constituting what is present to us as we are." [5]

[3] John Berger, *Ways of Seeing* (London: Penguin Books, 1972), 7.
[4] Chris Jenks, *Visual Culture* (London; New York: Routledge, 1995), 1.
[5] Berger, 8-9.

In this sense, Berger argues that the *way* in which people see (that is, their cultural and temporal contexts) is every bit as important as (or perhaps more so than) the images themselves. What we know or believe determines how we interpret what we see. Susan Sontag in her book *On Photography* emphasizes a similar perspective to Berger's. Sontag argues that photographs are constructed images of reality to the same degree as paintings or drawings—that although viewers often associate the medium with veracity ("seeing is believing"), photography is not immune to the "usually shady commerce between art and truth."[6] Sontag and Berger both propose that seeing does not represent an objective reality—we see what we want to see, what someone else wants us to see, or some combination thereof. In this sense, images - like all stories - are always selective; they can never be impartial or unbiased. They have been crafted to tell specific stories to a specific audience. Relying upon Berger and Sontag, with supporting literature from scholars in marketing and communications, later chapters will demonstrate that images of the polar bear have been used to tell carefully crafted stories in media from commercial advertising to *National Geographic Magazine*.

The French theorist Roland Barthes' semiotic framework helps decipher visual culture. Semiotics, simply put, is the study of signs, a line of inquiry that emerged out of the linguistic tradition in the late nineteenth century. It has since been adapted as an interdisciplinary version of iconography and iconology by art historians: "Semiotics provides a different—and some would say more precise—language and framework for understanding the multifaceted connections between image and society and image and viewer, and for understanding not only *what* works of art mean but *how* the artist, viewer, and culture at large go about creating those meanings."[7] Barthes expanded the linguistic tradition of semiotics to include images as languages worthy of deciphering rigorously in and of themselves: "pictures, to be sure, are more imperative than writing, they impose meaning at one stroke, without

[6] Susan Sontag, *On Photography* (New York: Straus and Giroux, 1977), 6.
[7] Anne D'Alleva, *Methods & Theories of Art History* (London: Laurence King, 2014), 29.

analyzing or diluting it."[8] Barthes notes the ability of images to bypass the rational brain. While the need for language and words to have definitions and understandings is inherent and broadly accepted, images have yet to reach the same level of decipherment. Barthes argues that all images require the same scrutiny as written language: "like writing," he wrote "they call for a lexis."[9]

The polar bear, given its contemporary political symbolism, certainly calls for a lexis and offers an excellent example of what Barthes defines as a "myth." Notably, Barthes and other semioticians distinguish myths from demonstrable falsehoods. In Barthes' usage, myths resemble extended metaphors—they help explain cultural experiences and are deeply rooted in historical and cultural contexts. Myths operate by naturalizing the cultural. They transform the dominant values, beliefs, feelings, and subjective norms of a culture into natural, universal, and common place truths.

To appreciate how a myth operates in semiotics, we must first understand semioticians' use of the terms signifier, signified, and sign. The horseshoe provides a good example. The nine letters on the page or the sound in the air or any other likeness of a horseshoe is the *signifier*. The mental representation of a horseshoe, that is, a metal "U" shape fashioned to fit a horse's hoof, is the *signified*. The signifier cannot be separated from its signified—that is, the word horseshoe relies upon the mental representation or understanding of horseshoe. Together, the *signifier* and the *signified* form the *sign*: horseshoe. Breaking down a sign or symbol in this manner divorces the cultural meaning from a sign and allows a viewer to more easily analyze its component parts and meanings.

A myth, according to Barthes, develops when a sign itself becomes a signifier, and creates an entirely new sign on top of the previous signifier, signified, and sign. In the example of the horseshoe, a new signified of "good luck" is added. So, taking the sign of horseshoe and adding the concept of "good luck" as the signified leads to our second order sign or myth: horseshoes are good luck charms.

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[8] Roland Barthes, "Part Two: Myth Today," in *Mythologies* (New York: Hill and Wang, 1972), 219.
[9] Ibid.

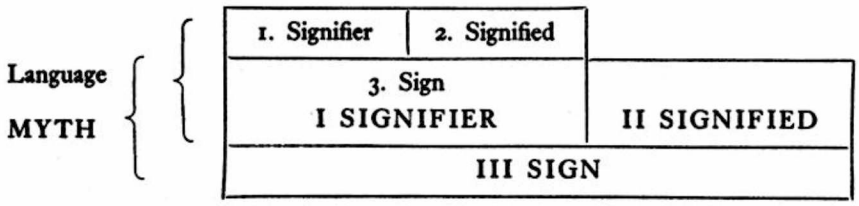

Figure 1: Chart from p. 224 of Barthes' *Mythologies*

A myth can be anything, according to Barthes, "for the universe is infinitely fertile in suggestions."[10] Myth is merely a mode of signification. It is not defined by the object of its message, but by the way in which it utters this message.[11] This thesis argues that the polar bear has transitioned from one myth to an opposite myth in less than 200 years—from ferocious and sublime predator to vulnerable climate victim. The application of semiotic theory helps decipher contemporary narratives of the polar bear, deepening our understanding of how myths operate culturally, and illuminating how the polar bear achieved political leverage in American society today.

Methodology

I use the method of discourse analysis from the field of visual culture, combining elements of art history, history, and critical theory in this thesis. Visual culture, also known as visual studies, is a new discipline for the study of cultural construction of the visual arts, media, and everyday life. This field of research regards the visual image as the focal point in the processes through which meaning is made in a cultural context.[12] Visual studies understands perception to be a product of experience and acculturation, and the field analyzes visual representations as one of many signifying structures

[10] Ibid., 218.
[11] Ibid., 217.
[12] Margarita Dikovitskaya, *Visual Culture : The Study of the Visual after the Cultural Turn* (Cambridge, Mass: MIT Press, 2005), 1.

that encompass culture.[13] Unlike art history, visual culture concerns itself with 'images' rather than just 'art,' taking the position that regardless of its aesthetic or technical quality, *any* image may serve as evidence. As historian Peter Burke explains in his book on the use of images as historical evidence, "maps, decorated plates, ex-votos, fashion dolls and the pottery soldiers buried in the tombs of early Chinese emperors all have something to say to students of history today."[14]

The polar bear's reputation, presentation, and use in America has reversed in a short 150 years and this reversal has stories to tell. The discourse analysis in this thesis pays careful attention to images and social construction, as well as other pieces of historical and cultural evidence. Discourse analysis explores how images construct specific views of the social world and how humans perceive those accounts as real or truthful or natural through particular regimes of truth.[15] All discourse is organized to be persuasive, and the most powerful discourses—in terms of their social effects—depend on assumptions and claims that their knowledge is true.[16] The discourse analysis used in this thesis focuses on these strategies of persuasion, and how and why powerful regimes of truth shift historically.

Images as historical evidence in discourse analysis have been employed across the social sciences. Environmental historian Finis Dunaway has contributed to our understanding of American environmentalism through two published books analyzing the communicative power of images used by the environmental movement. His first book, *Natural Visions: The Power of Images in American Environmental Reform* tells the story of how visual imagery in the early twentieth century—such as Sierra Club coffee-table books, New Deal documentary films, and wilderness photography—shaped modern American perceptions of the natural world and led to the development of the contemporary

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[13] Ibid., 2.
[14] Peter Burke, *Eyewitnessing : The Uses of Images as Historical Evidence*, Picturing History (Ithaca: Cornell University Press, 2001), 16.
[15] Gillian Rose, *Visual Methodologies: An Introduction to the Interpretation of Visual Materials*, 2 ed. (London: Sage Publications Ltd., 2007), 140.
[16] Ibid., 138.

conservation movement. By examining the relationship between images and environmental politics, Dunaway reveals how photographers and filmmakers adapted long-standing traditions in American culture to picture nature as a place of grace for the individual and the nation.[17] Dunaway's second book, *Seeing Green: The Use and Abuse of American Environmental Images* surveys the relationships among visual images and American environmentalism from the Cold War 1950s to the eco-consciousness of today. He turns a more critical eye toward a wide variety of images and media sources including advertisements, movies, cartoons, and photo essays and contextualizes them within larger discussions of public life, environmental citizenship and the limits of visual democracy. Dunaway's analysis suggests that the iconic imagery of the environmental movement has shifted the public focus from structural change to individual solutions, shielding corporate polluters from critical scrutiny.[18]

American Historian David Nye takes a similar approach to Dunaway in his 1994 book *American Technological Sublime*, in which he explores the social construction of technology in America. As science and technology progressed, the natural sublime gave way to the engineer and a new sublime emerged in industrial America, one described by Nye as the "technological sublime." Nye argues that the massive infrastructure projects of the twentieth century had the same emotional impact of the natural sublime. Viewers of the Hoover Dam, for example, would first be struck by fear, terror, and awe in the face of its enormity in an otherwise empty place, but this fear would transition to pride in man's ability to bend the forces of nature to his desired purpose. Nye argues that the sublime aesthetic underlies American enthusiasm for the great infrastructure projects of the first half of the twentieth century, and he considers this new form a contingent category within American social and political systems.

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[17] Finis Dunaway, *Natural Visions: The Power of Images in American Environmental Reform* (Chicago: The University of Chicago Press, 2005).

[18] *Seeing Green: The Use and Abuse of American Environmental Images* (Chicago: University of Chicago Press, 2015).

Like Dunaway and Nye, this thesis analyzes images and artifacts to support the historical narrative. These images act as lenses through which to consider our historical and contemporary understandings of human-animal relationships in the United States. I collected an archive of commercial images and ephemera related to the polar bear to visually quantify aesthetic changes to depictions of the bear through time. The images selected were produced and published in the United States between 1830 and 2018 and were widely circulated and/or publicly available. I place weight on advertisements and magazine articles, based on their alignment with the previously stated search criteria. While I cite specific works of influential fine art, I do not emphasize this genre owing to its limited public accessibility and consumption. I collected images primarily through digital archives online, as well as within private and personal collections, with a few purchased through eBay.

These images do not exist in a vacuum. To contextualize the social construction and use of these images, I cite literature including articles, books, newspapers and other publications relating to American visual culture and interpretation, environmentalism, the polar bear, climate change communication, Arctic history and exploration, and other such topics to provide context for the analysis. The authors discussed in the previous theory section—Berger, Sontag, and Barthes—not only pose compelling theories but also useful tools for deeper image analysis. I apply Barthes' semiotic framework in particular to deconstruct social and cultural understandings of the polar bear historically and today.

The selection of sources for this research came about organically, with a strong preference for books and articles interpreting the history of the Arctic from my Arctic and Northern Studies coursework. From this broad historical foundation, I cross-referenced bibliographies for authors whose work addresses climate change communication, polar bears, Arctic imagery, environmental history, and the contentious discourse surrounding climate change. I selected sources based on a wide variety of criteria, including the depth of supporting research evident in the publication and

bibliography, and a demonstrated understanding of the social complexities of Arctic communities, history, climate science, and/or policy. I also pursued research taking new or creative approaches to visual environmental communication.

Given the contested discourse on climate change and the powerful stakeholders engaged in the debates, sources espousing "truths" about the Arctic and the climate abound, many collapsing the region's complex reality down to excerpts and sound bites that amount to little more than propaganda. Such publications demonstrate how various stakeholders frame their perspectives, but I selected the bulk of sources based on the authors' academic rigor.

Limitations

While interdisciplinary research allows the rich integration and synthesis of a multitude of literatures, it also poses substantial challenges. The pool of references increases four to five-fold and makes it challenging to delimit appropriate search parameters. I sought advice and consultation with experts in various fields, both at the University of Alaska Fairbanks and other institutions. I carefully cross-referenced bibliographies to ensure inclusion of seminal works from each discipline in my research.

Image research poses its own limitations as well, including availability, quality, conservation concerns, and financial constraints. The images I have included in this thesis are those that I could reasonably find within my own time, travel, and financial constraints. Archives across the country contain extensive collections of ephemera in vertical files that have yet to be digitized. I look forward to expanding my research and personal collection as time and money allow. I would also like to acknowledge the influence of children's toys, cartoons, and Hollywood movies in the shaping of public opinion and attitudes towards the Arctic and the polar bear. I make cursory references to these goods and media in my thesis, but they lie beyond the scope of this master's research.

The last and most glaring limitation to my research is the omission of indigenous perspectives of the polar bear. Peoples indigenous to the Arctic have cohabitated with the bear since time immemorial and hold deep understandings of the animal biologically, culturally and spiritually. As this research focuses on broad cultural trends within the colonizing culture, particularly reflecting American industrialization, the long and rich history of indigenous perspectives falls outside the capacity of this master's thesis. This research would benefit from future expansion to include cross-cultural perspectives. Similarly, I have chosen to delimit my scope to North American perceptions of the polar bear and acknowledge that perceptions and cultural contexts vary throughout the circumpolar north and elsewhere.

CHAPTER TWO
The Polar Bear in American Culture

When Alaska Senator Frank Murkowski took to the floor of the U.S. Senate in a 2001 debate on opening the Arctic coastal plain to oil development, he pulled out a white sheet of paper. Waving it about he said, "That is all you can see in winter on the Arctic National Wildlife Refuge's coastal plain—just snow and ice."[1] His message was clear. It is absurd to save something where there is nothing.

The Arctic is geographically remote and home to climates, cultures, and animals far removed from the everyday lives of most Americans. This lack of familiarity and understanding makes the region particularly vulnerable to the powerful framing effects of images. Without personal experience of the region, Americans rely on media to conceptualize and understand the Arctic. This is most notable today in the proliferation of Alaska-based "reality" TV shows. *Ice Road Truckers, Deadliest Catch, Edge of Alaska, Ultimate Survival Alaska, Alaskan Bush People,* and *The Last Alaskans* are among nearly three dozen such programs on cable television. Like the popular adventure novels that preceded them, these shows perpetuate romantic, one-dimensional frontier narratives and old tropes of man vs. wild that collapse Alaska's complex histories, cultures, and issues into a few inaccurate stereotypes. Although producers create these "unreality" Alaska shows for profit and entertainment, their pervasiveness in American media culture and their pseudo-documentary film style lends them an aura of truth no matter how fictitious or absurd the storyline. Repeated exposure to this faux reality content perpetuates widely held myths, misconceptions, and falsehoods about the North.

[1] Terry McCarthy, "The Last Wild Place: War over Arctic Oil," *TIME Magazine*, February 19 2001.

These old dramas of the daily struggles of frontier life lived along the edge of wilderness and society have long been part of the American mythical landscape. The Greeks and Romans had their gods and goddesses, and the United States had the Wild West. From pilgrims to pioneers, many of our most cherished national stories involve robust people overcoming adversity in a "wild" place. As Frederick Jackson Turner famously posited in his 1893 essay "The Significance of the Frontier in American History," American identity relies on the very existence of this space—the space where the edge of civilization meets the wild, the boundary of westward expansion, and north to Alaska, where the official state slogan is "The Last Frontier."

Visual images play a critical role in America's evolving relationship with the North and reflect the cultural values of their time. How a given image is conceived, presented, and distributed can change its meaning. Therefore, with the ability to produce Arctic images comes the ability to influence or control public understanding of the Arctic, as well as the power to frame the region's most pressing challenges. Senator Murkowski, with his blank piece of paper—in its erasure of polar bear dens, caribou herds, and indigenous communities—strove to do just that by framing the Arctic coastal plain as literally nothing but a foolishly untapped economic opportunity.

Murkowski's depiction of the Arctic as a void—a blank slate ripe for the taking—is nothing new, but rather one example in a long history of Arctic images crafted with political agendas. For several hundred years, rival nations have imagined the Arctic as *terra nullius* with ambitions of conquest, expansion, resource extraction, and global prestige. Like the blank paper, expanding nations produced their own imagery to define and delimit the Arctic to better suit their national agendas.

This chapter explores the Arctic imagery produced historically in the United States and demonstrates how polar bears first entered the American public consciousness as ferocious and sublime Arctic predators. It then tracks the bear's cultural and commercial use, demonstrating that

nineteenth and twentieth century industrialization precipitated environmental sentiments in the United States and mediated the shift of the polar bear from feared predator to vulnerable and politically contentious climate victim.

Arctic Obsessions

The Arctic, and therefore the polar bear, first captured the American public imagination in the mid-nineteenth century—the golden age of Arctic exploration, an era that scholars have labeled the period of the "Arctic Sublime." The Arctic Sublime is an extrapolation of the sublime, an eighteenth and nineteenth century western cultural phenomenon that flowered during the Romantic Era, as part of the reaction to the eighteenth-century Age of Reason.

Early depictions of the Arctic were heavily romanticized as a pristine white mythical landscape beyond human comprehension. "… Arctic Nature was somehow vaster, more mysterious, and more terrible than elsewhere on the globe," Chauncey Loomis explained in his influential 1977 essay "The Arctic Sublime." It was "a region in which natural phenomena could take strange, almost supernatural forms, sometimes stunningly beautiful, sometimes terrifying, often both."[2] In many ways, this characterization captures our public understanding of the Arctic today.

The British Admiralty, idled by the peace that followed the Napoleonic Wars, renewed its search in the early nineteenth century with new fervor for a northwest passage across the top of the North American continent. The discovery of navigable waters in the American far North appeared a reasonable project to pursue, as a shorter trade route from the Atlantic to the Pacific would reduce time and costs associated with sailing around South America's Cape Horn. When whalers returned

[2] Chauncey Loomis, "The Arctic Sublime," in *Nature and the Victorian Imagination* (Berkeley: University of California Press, 1977), 96.

from the Arctic in 1817 and reported ice-free bays, second secretary of the Admiralty John Barrow launched a series of expeditions the following year that marked the beginning of three decades of exploration that would send thousands of British sailors into the Arctic.[3]

British popular literature depicted Arctic expeditions, and the beginnings of industrialization and mechanized mass production brought these stories to more people than ever before, including neighbors across the Atlantic. From scholarly journals to the penny press, publishers in both the U.K. and the U.S. produced a torrent of images and descriptions of the Arctic and its heroic explorers.[4] Fascination with the Arctic reached unprecedented levels in the late 1840s after the loss of the Franklin expedition. When Sir John Franklin and 128 others failed to return home in 1847, their disappearance proved to be the greatest mystery in the history of exploration.

Franklin and his two ships, *Erebus* and *Terror,* outfitted with reinforced hulls and steam-powered engines, had previously proven themselves in Arctic conditions, making their disappearance all the more mysterious and fueling public interest. After a series of unsuccessful British expeditions to find the lost men, Lady Jane Franklin, the wife of the missing explorer, appealed directly to U.S. President Zachary Taylor for help from the United States. Taylor in turn urged Congress to outfit a search expedition. Congress agreed that the moral and symbolic merits of an Arctic search expedition could earn the United States the world's praise. "I know that national reputation is national property of the highest value," stated Senator Andrew Butler of South Carolina, "and, if we can acquire reputation by making this discovery, I shall rejoice at it."[5] The uncharted lands and waters of the

[3] Michael F Robinson, *The Coldest Crucible: Arctic Exploration and American Culture* (Chicago: University of Chicago Press, 2006), 22.
[4] Ibid.
[5] Andrew P. Butler, "The Sir John Franklin Expedition," *Congressional Globe*, May 1850, 891.

Arctic—the blank spaces left on the map—presented a promising opportunity for the young and growing nation to demonstrate its power and prestige to the rest of the world.[6]

Engravers and artists, particularly those informed by the skilled prose and deft drawings of Dr. Elisha Kent Kane, played a central role in telling the story of Franklin's lost men. Kane was the first great American polar hero, and the most influential pioneer in the visual representation of the Arctic. Following the endorsement of the U.S. government to go find traces of the Franklin expedition, Henry Grinnell, shipping magnate and first president of the American Geographical Society, placed two privately purchased ships at the disposal of the U.S. Navy on the condition that it provide the equipment, officers, and crew.[7] The Navy agreed and selected Edwin DeHaven to command the Grinnell Expedition in 1851, with Dr. Elisha Kent Kane, a medical officer of the U.S. Navy as surgeon. The First Grinnell expedition, before turning back due to weather, came across the remains of Franklin's Beechey Island winter camp and the graves of three of Franklin's men.

Upon their return, DeHaven retired to his family farm leaving Kane to step readily into the limelight. A masterful self-promoter and gifted author and lecturer, Kane recognized the public fascination with Franklin's lost men and the mysterious Arctic environment, and leveraged it to garner support for a second search expedition. In negotiating with Harper Brothers, the publisher for *The United States Grinnell Expedition in Search of Sir John Franklin: A personal narrative*, his account of the first expedition, Kane placed great emphasis on illustrations. His high demands were a costly sticking point for the publishing house and delayed the process for months until all parties finally agreed upon a suitable artist and contract. As Mark Metzler Sawin explains in his book *Raising Kane: Elisha Kent Kane and the Culture of Fame in Antebellum American,* "The amount of time, energy, and money Elisha put into

[6] Robinson, 12.
[7] John McCannon, *A History of the Arctic: Nature, Exploration and Exploitation* (London: Reaktion Books Lid., 2012), 135.

the engravings show how important he felt they were to his narrative. They provided not only scientific precision via the detailed botanical and archeological sketches, but also Romantic emotion through the vivid and often ominous arctic [sic] scenes of gigantic icebergs that dwarfed the minuscule ships of the expedition."[8]

Kane realized that the illustrations would tell a story that words alone could not convey. The sketch-pad and the brush produced glimpses of the unimaginable Arctic landscape, and mechanized reproduction made interpretations of these hand-drawn images available on both sides of the Atlantic. Images of the Arctic entered American households across the country by way of illustrated newspapers, magazines, and dime novels carrying the harrowing accounts of Arctic explorers. The beginnings of industrialization democratized art and images—anyone could hang depictions of American Arctic exploits in their home and many did so with pride.

Although he never found Franklin, news of Kane's safe return home from the Second Grinnell Expedition covered the entire front page of the *New York Times*. The newspaper heralded him as a national hero.[9] His 1857 two-volume set from his second voyage titled *Arctic Explorations: The second Grinnell expedition in search of John Franklin, 1853, 54, 55* was even more lavishly illustrated than his first, and it would become one of the most popular Arctic narratives of all time, selling more than 150,000 copies in the following decades.[10] *Arctic Explorations* boasted on its title page: "Illustrated by upwards of three hundred engravings, from Sketches by the Author."

Kane's exploits and the hundreds of dramatic, romantic and terrifying illustrations in his books captured the American imagination and entrenched what scholars have called the aesthetic of the

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[8] Mark Metzler Sawin, "Raising Kane: Elisha Kent Kane and the Culture of Fame in Antebellum America," *Transactions of the American Philosophical Society* 98, no. 3 (2008): 104.
[9] Russell A. Potter, *Arctic Spectacles* (Seattle: University of Washington Press, 2007), 117. Original *New York Times* article published on October 12, 1855.
[10] Robinson, 54.

"Arctic sublime" into households across the country. The traditional attributes of the Arctic sublime emerged from Enlightenment era philosopher Edmond Burke's 1757 work *Philosophical Enquiry into the Origin of Our Ideas of the Sublime and Beautiful.* Burke emphasized the critical role terror plays in the sublime, asserting, "terror is in all cases whatsoever . . . the ruling principle of the sublime… and astonishment is that state of the soul, in which all its motions are suspended, with some degree of horror."[11] The sublime exists in stark contrast to the picturesque. Where the picturesque is easily understood, the sublime is incomprehensible and suggests a divine order beyond the understanding of man. Burke emphasized the role of the infinite and divine in the sublime, describing its character as beyond measure. Although the viewer is at first consumed with awe and terror in the face of the sublime, a sense of pleasure follows, according to Burke. In confronting the infinite, the viewer becomes aware of his own limitations and finds comfort in better understanding his place in the universe and divine order. As Diana Donald argues in her essay, "The Arctic Fantasies of Edwin Landseer and Briton Riviere: Polar Bears, Wilderness, and Notions of the Sublime," the Arctic sublime echoed many of Burke's ideas, including "the terror arising from darkness, solitude, obscurity and confusion; a sense of great undefined spaces stretching beyond lateral limits of the picture; ferocious bears, which like the Arctic itself, convey a sense of uncontrollable and menacing power."[12] Dark,

Example of the picturesque.
Emile Albert Gruppe, *Coming of Spring*

This scene is identifiable in scale and location: a pleasant winter scene with trees and a river. The viewer is not made to feel small, transcendent or threatened.

[11] Edmund Burke, *On the Sublime and Beautiful* (Adelaide: The University of Adelaide Library, 2007), 58.
[12] Diana Donald, "The Arctic Fantasies of Edwin Landseer and Briton Riviere: Polar Bears, Wilderness, and Notions of the Sublime," *Tate Papers*, no. 13 (2010).

unmapped, and beyond measure, the Arctic of the eighteenth and nineteenth centuries embodied many, if not all, the popular romantic notions of the sublime.

Example of the sublime aesthetic from Elisha Kent Kane, *The U.S. Grinnell Expedition, 1854*

The light, scale, and drama of this image conforms with the sublime aesthetic—nature dominates. The large swells and looming iceberg create a sense of imminent destruction for the ships, one partially obscured by ominous darkness on the horizon, creating a sense that worse is yet to come for the two ships. The flurry of sea birds creates an otherworldly atmosphere and heightens the drama of the scene.

Notions of the sublime were a powerful cultural phenomenon on both sides of the Atlantic in the eighteenth and nineteenth century. As described by author David B. Morris, the emergence of the philosophy of the sublime was like seeing a whole new world. "The discovery of the sublime was one of the great adventures of eighteenth century England," Morris wrote in a study of the religious sublime. "[A] taste developed among almost all classes of society for the qualities of wildness, grandeur, and overwhelming power which, in a flash of intensity could ravish the soul with a sudden transport of thought or feeling… Sublimity liberated the eighteenth century imagination from all that was little, pretty, rational, regular, and safe—although only for as long as the moment of intensity

could be sustained."[13] The illustrations from Kane's published accounts, particularly those of the polar bear, fall well within the realm of Burke's ruling principles of the sublime: terror and horror. The plates depicting polar bears involve direct confrontation amidst a landscape dominated by icy towers and looming cliffs—the bears mirroring with the same ferocity the terrible landscape they call home. In one, an ice bear stands towering over two men defensively wielding spears; the bear's face, partially obscured by the outstretch of its monstrous arms, reveals only a glimpse of bestial open jaws visible past its menacing claws. In another, four bears raid the expedition's food cache, jeopardizing the survival of the men. The bears paw at a large barrel and gnaw upon indistinguishable items strewn upon the ground, destroying the only recognizable vestiges of civilization. The Arctic landscape, and the ferocious animals therein, embodied the infinite and irrepressible power of nature. The ability to endure such terrible hardships stood as a testament to American character and bravery and linked public interest in the unknown fate of the Franklin expedition with national pride in American scientific and geographic prowess.

Plates from Elisha Kent Kane's *Arctic Explorations*

[13] David B. Morris, *The Religious Sublime: Christian Poetry and Critical Tradition* (Lexington: University of Kentucky Press, 1972), 1.

While Elisha Kent Kane's expeditions and public accounts first popularized the Arctic to the American public, many more American explorers built on his example. The popularity of Arctic images from late nineteenth century expeditions reveals not only how Americans regarded the North, but how American society saw itself during this time. For a young nation eager to assert itself in an era of expansion and colonial pursuits, seeing was not only believing, but also conveyed a sense of possession.[14]

Given the public interest in Arctic exploits, commercial advertising soon incorporated visual themes of the Arctic sublime into newsprint ads and trade cards for everything from cigarettes to honey-cured hams. The ads from this era introduced the first images of the polar bear as a trade character used to sell products. Unlike the humanized characters of today, the polar bear in nineteenth century advertising evoked the same menacing and monstrous aura as the terrible Arctic landscape that claimed the lives of all 129 members of the Franklin expedition. This depiction corresponds with Enlightenment era values of the time, values that placed man and his capacity to reason well above the realm of animals in the Great Chain of Being, and approaching closer to that of the divine. The bestial traits of the bear serve to emphasize its lower status and otherworldliness.

The animalistic qualities of the polar bear in these advertising images may appear exaggerated to contemporary viewers, but without photographic documentation of the bears or the Arctic landscape, advertisers and artists were left to interpret the written descriptions provided by published accounts. Artists often struggled to depict an animal described as a bear that lived on the ice and in the water. As a result, artistic interpretations often showed broad, out-turned and flipper-like paws, likely inspired by the drawings and descriptions of other ice dwelling animals like the seal and walrus. One 1881 issue of the illustrated weekly *Frank Leslie's Sunday Magazine* ran a full-page illustration titled

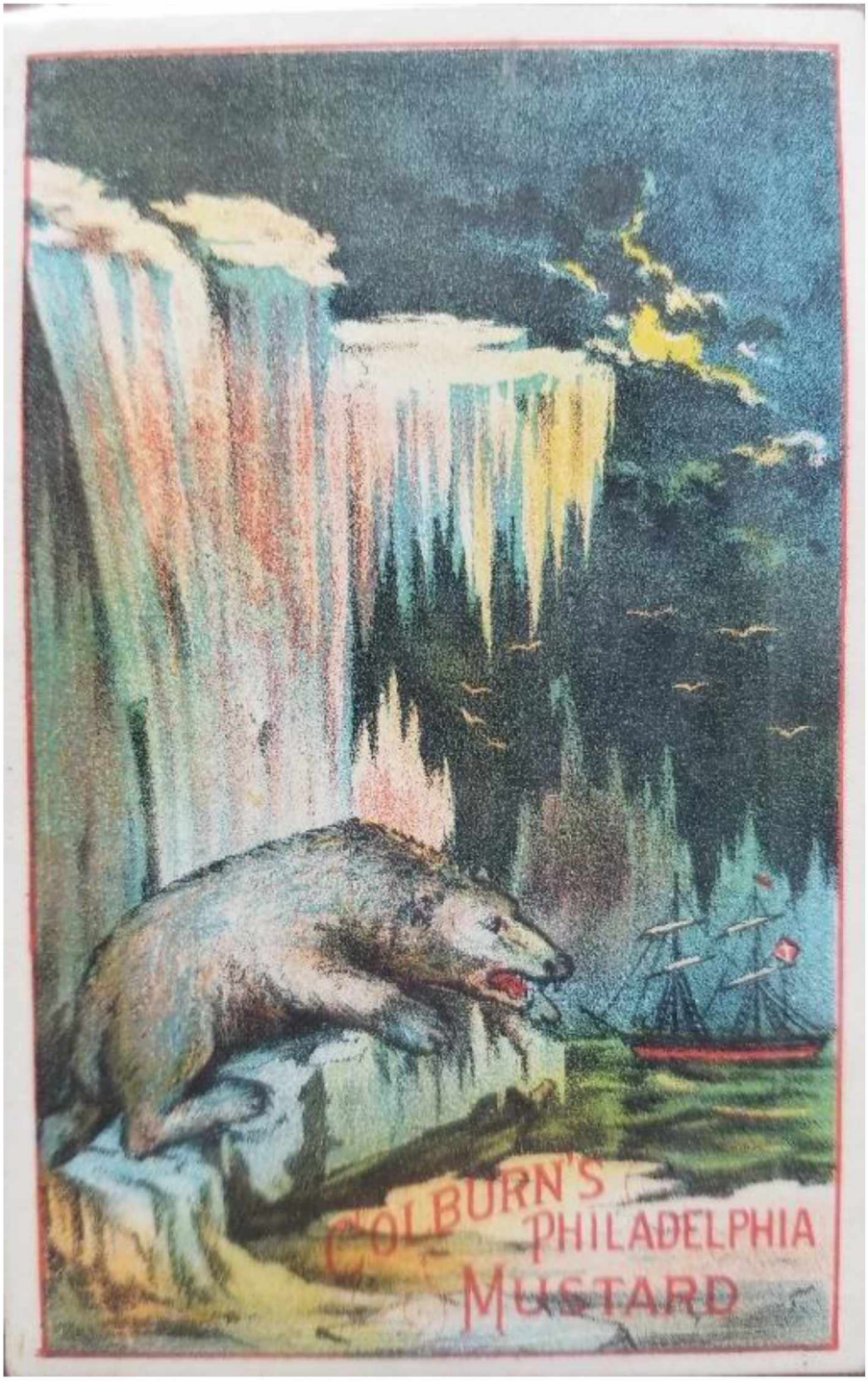
[14] Potter, 7.

"Polar Bears Feasting on a Stranded Whale." The accompanying text captures the language used to characterize the mystery, awe, and terror surrounding the American Arctic and the otherworldly animals therein:

> The early voyagers to the icy North of America were struck with astonishment at the Polar bear, which, in size, in snowy coat and fierceness, seemed a class by itself. Its half-amphibious character, too, made it a wonder, and gave rise to many a wonderful story. The early sailor who came back and told how he had seen a mass of ice floating on the sea, leagues away from land, yet with a huge white bear upon it, was looked on as a sad deceiver, spinning a most outrageous yarn.
>
> … When a whale, struck by a harpoon, escapes to die and float near shore, amid ice floes, the scent lures the bears from far and near, and a scene ensues such as our artist depicts in the land of desolation. The green sea seen in spots; the ice in all its fantastic forms; the dark skin of the luckless giant of mammals; the greed of the voracious shaggy creatures who, looking on the providential provender only in the light of supplies, make merry over it, form a picture well worthy of the pencil.[15]

On the full-page graphic and gory spectacle, deep shadowy contrast pervades the image; the dark and indistinguishable body of a whale floats along the surface of the shore ice where no fewer than six polar bears—stark in their whiteness—lurk and hunch along the ground to tear at the whale remains. The Arctic landscape sprawls out in jagged ice forms extending to the horizon. The landscape, like the bears, is exaggerated in these illustrations and consistent with the sublime aesthetic popular at the time—replete with the dominating icescapes, dwarfed ships and foreboding light. Like Kane's images of the polar bear, the bears in these popular ads and illustrations represent formidable adversaries. The "voracious shaggy creatures" gape in a snarl, often revealing terrifying teeth. Expedition ships frequently appear in the backgrounds of these ads and illustrations, tapping into national pride in American heroism and science. In one Colburn Mustard trade card, the eye follows the direction of a tiny ship, only to be confronted by the menacing jaws of a polar bear. Such visual tricks gave a sense of impending terror and doom to the image, further highlighting the perceived dangers of the Arctic landscape.

[15] T. DeWitt Talmage, ed. *Frank Leslie's Sunday Magazine*, vol. X - July to December 1881 (New York: Frank Leslie's Publishing House, 1881), 563.



Trade card, Colburn's Mustard, c. 1860

Trade card, unattributed, c. 1860

Trade card, ca. 1860, Merry, Faull & Company, California Historical Society, San Francisco.

Romantic notions of the Arctic sublime lost their currency in the latter half of the nineteenth century. Increasingly rapid industrialization and ground breaking scientific theories, including Darwin's evolutionary thesis in *On the Origin of Species*, fundamentally changed human-animal relationships in popular visual culture. In 1864, haunted by the fate of the Franklin expedition, artist Edwin Landseer painted an Arctic setting that would become internationally renowned for its portrayal of the brute force of nature, entitled, "Man Proposes, God Disposes." The painting marks a visual turning point for the Arctic sublime and the polar bear, as well as a philosophical shift to the post-Darwinian world. Two polar bears dominate the grisly shipwreck scene; one shredding the ship's fabric sails with a muscular jaw and the other relishing the crunch of presumably human bone between its teeth. For Victorian audiences – British and American alike -- still reeling from the loss of the Franklin expedition and the rumors of cannibalism in the men's final desperate days, Landseer's painting was shocking and grotesque.

Man Proposes, God Disposes. Edwin Landseer, 1864

Landseer's hellish painting rejects the romantic notion that humans are an extension of the divine and places them squarely within the realm of animals. In this case the humans are hardly the fittest, unworthy of survival against the teeth and claws of the polar bears. As Chauncey Loomis so perfectly describes in his 1977 essay *The Arctic Sublime*, both the painting and the title represented a "violent emotional backlash from the Franklin Expedition and from the romanticizing of the Arctic that has been associated with it."[16] The painting "Man Proposes, God Disposes" *equates* the actions of man and bear under the extremes of hunger, referencing the desperation of Franklin's men in their final hours. Landseer's painting depicts the new order of the post-Darwinian age: one that demythologizes nature and establishes man as evolved from beasts and not the hand of divine creation.

Having exhausted the noble cause of the Franklin expedition, Arctic exploration after 1865 took on a decidedly different aura. Expeditions were expensive and dangerous, and it became increasingly difficult after the Civil War for those with Arctic ambitions to justify the investment to a government focused on reconciliation and reconstruction. Promoters of Arctic exploration revisited themes of national pride and amplified them under the banners of scientific inquiry and racing to be the first to reach the North Pole. Explorers Isaac Hayes' and Charles Hall's expeditions of the 1860s and '70s failed to capture the same level of enthusiasm from a war-weary public as Kane's had. In the following decade, however, the tragedy of the USS *Jeannette,* crushed by ice in 1882, the subsequent scandal surrounding the competency of Captain George De Long, and the haunting tale of the starved Greely expedition breathed new life into America's Arctic interest. With ample material to choose from, the 1880s witnessed a rise of investigative and sensational genres of journalism that focused on tragedy and scandal to sell papers, and Arctic exploits fell into these categories.[17]

[16] Loomis, 111.
[17] Robinson, 89.

An aesthetic shift also occurred in American advertising and depictions of the Arctic in the late nineteenth century. As America's industrial might expanded, the new technologies changing the character of American life made their way into Arctic images and interpretations of the American landscape. These images reflected a fundamental change in human-animal and human-environmental relationships that accelerated during the twentieth century. Images of the polar bear began to shift from sublime and ferocious adversary—bestial foil to the divinity of man—to an animal overcome not by divine providence but by advancements in technology, travel, and science. New machines and technologies of the late 1800s entered the sublime landscape, their engineering and complexity evoking the same wonder and awe as their surroundings.[18]

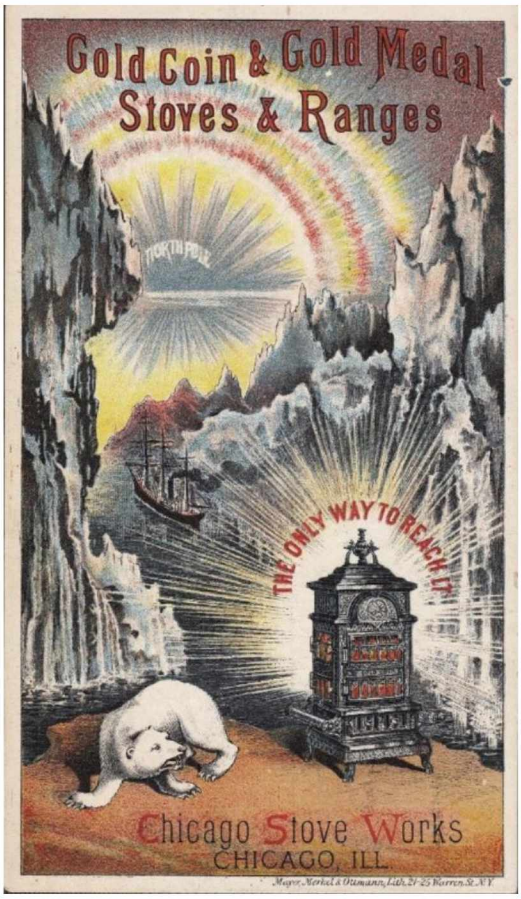
Images from this era portray technology as equal to the power of the Arctic landscape, and integral to the success of American expeditions to the pole. A Bussey & McLeod Stove Co. trade card from the late 1880s shows a polar bear cowering in confusion near a brightly burning stove with the words "THE ONLY WAY TO REACH IT!" blazing above it. In the midground, a coal-powered ship effortlessly glides towards a horizon emblazoned with the label "NORTH POLE." A dark plume billows out of the ship's smoke stack and coalesces with the dark shadows of the surrounding cliff ice formations. In this advertisement, the radiance of the stove and the potential bound in American technological achievement are as shining and dramatic as the surrounding Arctic landscape, the halo of the stove mirroring the Arctic Helios radiating from the North Pole. Overwhelmed by both the stove and the Arctic landscape, the polar bear shrinks to a mere accessory.

A similar trade card from the 1880s by Taunton Iron Works Co. shows Greely and his men triumphantly posed around a coal stove. The men appear at ease and comfortable in the frozen environment thanks to the wonders of coal-powered heat. The ad reads along the right margin, "Lieut

[18] David E. Nye, *American Technological Sublime* (Cambridge: The MIT Press, 1994), 59.

Greeley [sic] arrives at the North Pole." The imagery celebrates the accomplishments of man not only in persevering in the Arctic environment but thriving in it due to American ingenuity and technology. In this ad, the stove takes center stage and dominates the image. A black plume of smoke churns out the top of the stove pipe and white steam spews from the kettle. Almost as an afterthought, a slain polar bear lies at the feet of a jubilant expedition member, the bear again rendered smaller than the stove. The bear's singular bloodied entry wound and proximity to the stove and cookpot implies that the bear was not killed in defense, but rather purposefully hunted for dinner. This scene completely reverses the messages of the bear as predatory Arctic adversary and menace that dominated in previous decades. A colorful and dramatic Arctic sky and icescape fill the glowing background. The once ferocious polar bear and looming icescape no longer threaten these Arctic explorers. Instead the geometric majesty of the ice enhances the impact of the ornately decorated stove—both rendered in careful linear detail—and the once deadly polar bear represents a welcome meal.

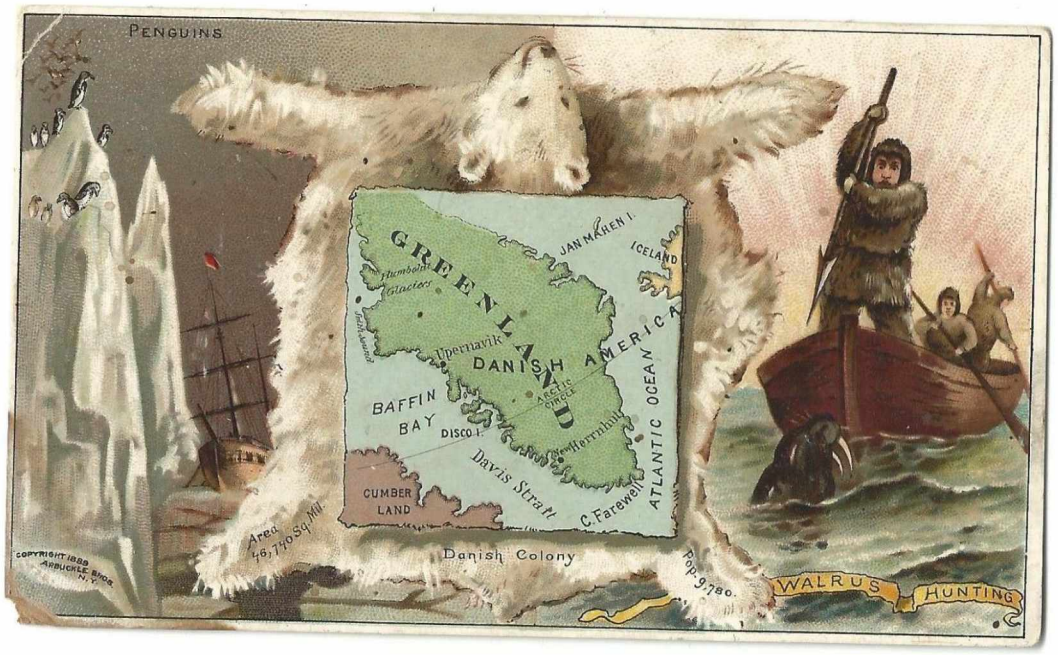
Ironically, Greely never reached the North Pole. No such triumphant feast scene came to pass for Greely and the men of the Lady Franklin Bay expedition. When rescuers finally arrived, they found the starved and delusional Greely, only minutes or hours away from death. While he did achieve the farthest north latitude for his time, he lost all but seven of his men, and those who survived suffered severely from scurvy and starvation.



Trade card
Chicago Stove Works, c. 1880s

Trade card. Taunton Iron Works, Co., c. 1880s

By the beginning of the twentieth century nearly every Arctic waterway and landmass had been charted and claimed like "crusaders seizing a hoarfrost citadel," according to Canadian historian John McCannon.[19] Romantic notions of the Arctic sublime fell by the wayside as America turned its focus to rapid industrialization and nation building. Polar bears were no longer otherworldly beasts of the Arctic sublime, but rather bestial brethren created by the same evolutionary process that wrought man. The rise of science, geographic charting, and technology demystified the Arctic and reduced its sublimity. As Chauncey Loomis closed his influential essay, "The sublime cannot be mapped." An 1889 Arbuckle Bros. Coffee Co. trading card advertisement illustrates the evolving views of the Arctic well: it superimposes a map of Greenland atop a full polar bear hide. The bear and map are conflated as possessions—as spoils of national conquest and exploration, a testament to the reach of American bravery and prowess. As nations quantified the coasts, islands and waterways of the Arctic, so too did they quantify the polar bear.



Trade card. Arbuckle Bros. Coffee Co., c. 1890s

[19] McCannon, 126.

The Polar Bear, Industrialization, & the American Sublime

> …a region grand enough for the seat of a great empire. In its wheat-fields, its broad ranges of the chase at the north, its inexhaustible lumber lands, the most extensive now remaining on the globe—its invaluable fisheries, and its yet undisturbed mineral deposits, I see the elements of wealth.[20]
>
> - William H. Seward, 1857

A strong proponent of American expansionism and empire, William Seward recognized the economic wealth contained in the far north reaches of the North American continent and its potential to further his ambitions of extending toward the Pacific. Beginning in 1867 and continuing through the 1870s, nearly half of the Arctic transferred to North American hands. This shift in Arctic regimes began with the U.S. purchase of Alaska from Russia and continued through the late century with the transfer of Arctic and subarctic British territories to the newly established Dominion of Canada.[21]

In the latter part of the nineteenth century, the U.S. government sent numerous expeditions to the new U.S. territory of Alaska to map and chart its geographic features and mineral resources.[22] The mapping and quantification of the Arctic and its possessions were critical for a growing nation in the early industrial age. Arctic historians such as Charles Emmerson and John McCannon emphasize that the U.S. government valued Northern territories as economic assets critical to fueling rapid national growth. Although Arctic expeditions continued into the twentieth century (particularly those motivated by the race to reach the North Pole), the great Arctic explorer gave way to the engineer as technology and industrialization progressed, and a new sublime emerged in industrial America: the technological sublime.

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[20] Frederick W. Seward, *William H. Seward: A Memoir of His Life, with Selections from His Letters, 1846-1861* (New York: Derby and Miller, 1891), 319.

[21] Charles Emmerson, *The Future History of the Arctic: How Climate, Resources, and Geopolitics Are Reshaping the North, and Why It Matters to the World* (London: Vintage, 2011), 74.

[22] For a thorough discussion of the intensive efforts by the U.S. government to explore and document Alaska in the second half of the 19th century, see: Morgan Sherwood, *Exploration of Alaska, 1865-1900* (Fairbanks: University of Alaska Press, 1992.

Great technological innovations in the early twentieth century changed the character of American life: electricity, the telephone and telegraph, railroads, streetcars, bicycles, the automobile, and the airplane. Industrialization collapsed distances, accelerated the pace of life, and created a larger more prosperous middle class. Advancements in mechanical production made more commercial products available to more people in more places, at lower prices. Bridges, canals, dams, and skyscrapers altered the American landscape and seemed to overshadow nature's previously formidable elements.

As these technologies accelerated life in the contiguous United States, large infrastructure projects commenced in Alaska to encourage further settlement and connect America's northern territory to the mainland. In 1900, Congress authorized the construction of the Washington-Alaska Military Cable and Telegraph System (WAMCATS), a telegraph communication line connecting Alaska to Washington state. Completed in just four years, WAMCATS was the longest communications cable of its time, consisting of over 2,000 miles of underwater cable and approximately 1,500 miles of land lines.[23] Ironically, the head of the U.S. Signal Corps during the construction of WAMCATS was Gen. A. W. Greely, the famed leader of the disastrous Greely expedition in the 1880s. It was Greely who said that building WAMCATS was "an absolute military necessity."[24]Alaska's mineral wealth and connection to the Pacific represented strategic assets to the United States at the turn of the century, as the nation asserted itself as a world naval power. In an effort to restrain private development and ensure that the spoilage and mass giveaways of the American West were not repeated in Alaska, the Federal government built the Alaska Railroad through Cook Inlet and developed Southcentral Alaska's coal deposits. It was the first and only federally

[23] Jessup, David Eric. "Connecting Alaska: The Washington-Alaska Military Cable and Telegraph System." *The Journal of the Gilded Age and Progressive Era* 6, no. 4 (2007): 384-408.
[24] Ibid., 390

constructed and operated railway in the United States, a testament to Alaska's perceived strategic and economic value.

Just as monumental feats of engineering changed the American landscape, economy, and pace of life, advancements in printing, photography and advertising accelerated American visual culture and image production. By 1922, the poet, writer, and film critic Vachel Lindsay argued that the modern state for images in America demanded a new form of visual literacy, an observation that remains just as relevant today. According to Lindsay, literacy had become more the art of reading images than interpreting words: "American civilization grows more hieroglyphic every day. The cartoons... the advertisements in the back of magazines and on the bill-boards and in the street-cars, the acres of photographs in the Sunday newspapers, make us into a hieroglyphic civilization far nearer to Egypt than to England."[25]

As language yielded power to the visual image, a seemingly chaotic system of visual signs generated daily on a colossal scale informed and articulated modern American culture. This proliferation of visual images occurred not only in commerce, but in the private homes of Americans across the country. Innovative hand-held cameras offered mail-in film development services, making the previously complex medium available to amateurs. As a Kodak sample album from the late 1880s proclaimed, "Reader! You, Anyone, can make photographs…without study, trouble, experiment, chemicals, dark room, *and even without soiling the fingers.*"[26] By 1900, American families could purchase a Kodak box camera for $1, equivalent to roughly $25 today.[27] Snapshot photography—that is, the act of image making through the push of a button—became one of the most beloved American pastimes.

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[25] Vachel Lindsay, *The Art of the Moving Picture* (New York: Modern Library, 2000, 1915, rev. 1922), 14.
[26] Text from *The Kodak Primer,* a booklet included with the purchase of the first Kodak cameras around 1900.
[27] Sarah Greenough and Diane Waggoner, *The Art of the American Snapshot 1888-1978: From the Collection of Robert E. Jackson* (Washington: The National Gallery of Art, Washington, in association with Princeton Univerisity Press, 2007), 14.

Historian David Nye argues in his book *American Technological Sublime* that the great technologies and massive infrastructure projects of the early twentieth century produced the same emotional impact as the natural and Arctic sublime. Viewers of the Hoover Dam, for example, would first be struck by fear and awe in the face of its enormity, but this fear would transition to pride in man's ability to bend the forces of nature to his desired purpose. In this sense, the power of the sublime passes from the divine to the machine. Nye stresses the politics of sublime experiences, which help to validate new social and technological conditions.[28] In this sense, he argues that the technological sublime "has been one of America's central 'ideas about itself'—a defining ideal, helping to bind together a multicultural society… Ever since the early national period the sublime has served as an element of social cohesion, an element that was already quite evident when the first canals were dug and steam engines were first harnessed to trains."[29]

The commodification and anthropomorphizing of polar bears in the early twentieth century reflect cultural changes mediated by technology and industrialization. Great feats of engineering altered how Americans experienced the natural world. Technology was viewed as an extension of nature, imbued with the same infinite possibility as the natural sublime. Even the great Transcendentalist Ralph Waldo Emerson equated the wonders of engineering with that of awe inspiring nature: "When its errands are noble and adequate, a steamboat bridging the Atlantic between Old and New England and arriving at its ports with the punctuality of a planet, is a step into harmony with nature."[30] However, where every human imagination wavers before the natural sublime, the technological sublime is *made possible* by the superior imagination of the engineer—the creator of the machine that overwhelms the imagination of ordinary men.[31] But as David Nye argues, this inspiring

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[28] Nye, xvii.
[29] Ibid., xiv.
[30] Ralph Waldo Emerson, *The Selected Writings of Ralph Waldo Emerson*, Modern Library ed. (New York: Modern Library, 1950), 315.
[31] Nye, 60.

effect is only temporary. "Machines that arouse awe and admiration in one generation soon cease to seem remarkable, and the next generation demands something larger, faster, and more complex."[32] In this sense, the technological sublime undermines all notions of human limitation and instead presupposes an infinite ability to innovate and transform the world.

Perhaps the rise of American consumer culture can be seen as an extension of the technological sublime, and in the early decades of the twentieth century, rather than serving as a counterpoint, foil, or adversary to civilized humans or heroic Arctic explorers, polar bears came to personify manufactured products for sale. Polar bears entered advertising as trade characters associated with specific traits like cold, white, or clean to mirror products with the same qualities. While themes of heroism and danger persisted, the polar bear began to transition from a sublime animal meant to catch a buyer's eye to a charismatic anthropomorphic trade character that more closely resembles popular polar bear advertisements today.

Polar bears were commonly featured in soap ads, from Arm & Hammer to the Van Haagen Soap Mfg. Co. Their bright white appearance and associations with the crisp, pristine Arctic made the bear a natural choice for manufacturers of cleaning products. Although the ads rendered the bears naturalistically, they reflected a changing characterization of the animal that continued through the midcentury, one that painted the bears as less and less ferocious. The polar bear entered children's popular literature, for instance in *Magic Lantern Alphabet of Animals* from c. 1900. A company trade card produced by Jas. S. Kirk & Co. Soap replaced the heroic explorers common in the previous century with two small children with curly-toed shoes and fur buffs out for a walk. The two are startled by the presence of a polar bear roughly the size of a large dog. The scene conveys a sense of playful and unexpected adventure more than sublime dread. Similar themes can be found in popular children's dime novels of the era.

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[32] Ibid.

Pages from *Magic Lantern Alphabet of Animals*, c. 1900.
University of Princeton library.

Jas. S. Kirk & Co. Trade card, c. 1900

Through its associations with products and consumerism, the polar bear began to be anthropomorphized and humanized in the early twentieth cetury. A wool vest ad from 1902 shows a towering polar bear jauntily embracing a man and a woman: its enormous paws draped around each of their shoulders as though the three are old friends. Printed on the bear's chest is "We Defy the Cold." The man and woman appear relaxed, the woman going as far as returning the bear's embrace with her head settling back to rest on the animal's shoulder and her hand holding his paw. Their ability to stay warm in the frigid elements unites them: the humans thanks to their Frost King and Frost Queen wool vests. The ad conveys to the viewer that through the purchase and use of this wool product, consumers can be as warm and comfortable in chilling temperatures as a polar bear in the Arctic. Hence the use of "we"—the polar bear, man and woman together are all capable of defying the cold. The scene divorces the bear from its ferocious and sublime associations of the previous century in this ad—all that remains is the animal's association with a cold environment. The advertisement employs a new tactic here: one that displays the bear as a relatable friend. The emergent concept of shared experiences across the human-animal divide (feeling cold, in this case) dominates this ad and will continue to solidify as the century progresses.

1902 Bauer & Black ad for Chamois Vests

In the early twentieth century, the American population began to concentrate in urban centers, and relationships and attitudes towards the environment changed. As humans separated from nature and increasingly emphasized its utilization in the name of progress, their fearful reverence for animals—particularly bears—evolved into concepts of exploitation and subordination.[33] "The frontier had come to an end; it had vanished" lamented Theodore Roosevelt.[34] In fact, the end of America's frontier life alarmed him. Convinced that experiencing the wilderness promoted "that vigorous manliness for the lack of which in a nation, as in an individual, possession of no other qualities can possibly atone," Roosevelt feared modern America risked diminishing in virility and greatness.[35] To counter this trend toward "slothful ease" he called upon his countrymen in 1899 to lead a "life of strenuous endeavor."[36]

Roosevelt led this initiative by example, exalting the frontiersman's life from his ranch in the Dakota Territories and publicizing his big game hunting trips. A story from one such hunting trip captured headlines across the nation and changed America's relationship with bears forever. In November 1902, President Roosevelt traveled by train to Mississippi for four days of camping and black bear hunting. On the second morning of the hunt, his dogs caught the scent of a bear and chased it into swampy thickets outside of their camp. The hunting party gave chase, but Roosevelt turned back to camp for lunch while his famous bear hunting guide—a former slave named Holt Collier—continued on. After the bear killed one dog and badly injured another, Collier eventually cornered it later that afternoon, and cracked it over the head with the butt of his hunting rifle hard enough to

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[33] Stephen R. Kellert et al., "Human Culture and Large Carnivore Conservation in North America," *Conservation Biology* 10, no. 4 (1996): 983.
[34] Theodore Roosevelt, *The Winning of the West, the Works of Theodore Roosevelt*, 23 vols., vol. 2 (New York: G.P. Putnam's Sons, 1889), 13.
[35] Roderick Nash and Char Miller, *Wilderness and the American Mind*, Fifth ed. (New Haven, Connecticut ; London: Yale University Press, 2014), 150.
[36] Ibid.

subdue the animal and tie it to a tree before calling the president in for the honor of the kill.[37] The story holds that upon seeing the pitiful 235-pound female—injured, semiconscious, tied to a tree and shrunken due to a long drought in Mississippi—Roosevelt refused to shoot it. He felt such an act would violate his code as a sportsman. Instead, he asked a member of his hunting party to quickly end the bear's misery with a knife. But that detail of the story would quickly be lost.[38]

Instead, a Washington cartoonist named Clifford Berryman memorialized the moment of mercy days later in a cartoon he titled, "Drawing the Line in Mississippi." Berryman's scene depicts President Roosevelt in a peaceful stance, his rifle at his side and his hand outstretched like that of a saint calling to spare the animal. In the background, the bear looks rather helpless with large, childlike eyes filled with fear. The story of Roosevelt's moment of mercy swept the nation and resulted in a beloved childhood plush toy named after the president: The Teddy Bear.

Sketch for "Drawing the Line in Mississippi" by Clifford Berryman, 1902. Library of Congress

[37] Jon Mooallem, *Wild Ones: A Sometimes Dismaying, Weirdly Reassuring Story About Looking at People Looking at Animals in America* (New York: Penguin Press, 2013), 62.
[38] Ibid.

By the end of the decade the Teddy Bear had become a full-blown international craze. The German toy maker Steiff produced nearly a million stuffed bears a year.[39] A Teddy Bear owner could purchase outfits and hats and other accessories for the beloved toy—to dress it up as a fireman or bundle it up in outdoor wear for the winter season, despite its natural fur coat. America's love for the Teddy Bear came at a rather ironic time, as the federal government was still systematically eradicating bears, wolves, cougars, and coyotes with traps and poisoned meat.[40] Historically, these animals were demonized as a hindrance to national progress—brutal killers that ate the livestock that people raised to feed themselves and the growing nation. However city dwellers who would never have to fear the depredations of wild animals killing farm animals naturally took a kindlier view, and the rise in popularity of the Teddy Bear reflected changing attitudes towards these predators and other animals of the American wilderness.

Instead of spending time in nature, adults and children alike relied on secondhand descriptions of wild animals and environments. New ideas and valuations of wilderness entered the public consciousness through the nineteenth century writings of Henry David Thoreau, Ralph Waldo Emerson, John Muir, publications by the Sierra Club, and the movement to create permanent nature preserves and National Parks like Yellowstone and Yosemite. Instead of a space that seemed to offer infinite possibilities for safe development, the wild American landscape had become a diminishing commodity, one gradually seen to be worthy of preservation in perpetuity for future generations to visit and reconnect with the historic frontier so central to American identity. The popularity of Roosevelt's story illustrates the confusion just beginning to face Americans: animals now lived or died depending on human needs and desires. If the landscape was valuable to preserve, what was the value

[39] Ibid., 69.
[40] Kellert et al.

of the animals within it? What responsibilities attached to the ability to decide when a species lived or died?

Bears, more than any other animal, may remind us of ourselves. As prominent social ecologist Stephen Kellert observes in his paper on large carnivore conservation, bears display many typical human traits and characteristics: "the bear is capable of standing upright, its eyes face forward, its forelimbs can move freely; it snores when it sleeps and courts with affection. The bear has been acknowledged throughout the ages as the North American animal that most resembles humans physically [...] Those qualities we attribute to the bear—strength, speed, agility, power, savvy—may suggest that wilder, more independent side of human nature—our self that has gradually diminished in modern culture."[41]

The bear both physically and emotionally embodied the vigorous traits and lifestyle espoused by President Roosevelt as critical to American greatness, even as the public became more insulated from nature and safe from the danger of predatory animals, American culture applied new meanings to bears as cuddly companions. The Teddy Bear, in all its amusing iterations, expressed the charisma first recognized in bears in early twentieth century America.

The cultural shift of the polar bear from vicious predator to lovable friend emerged visually through increasing use of bears as anthropomorphic characters in all manners of advertising and ephemera. Polar bears, like their southern ursine counterparts, came to be depicted with human qualities, manners, and tastes. A popular postcard from ca. 1905 shows three bears sitting around a fire on an ice floe, two polar bears and one brown bear. The brown bear and one of the polar bears wear colorful three-piece men's suits and dress shoes. They both hold roasting sticks for cooking fish over a fire. The second polar bear is not clothed but sits like a large dog by the fire, smiling and licking

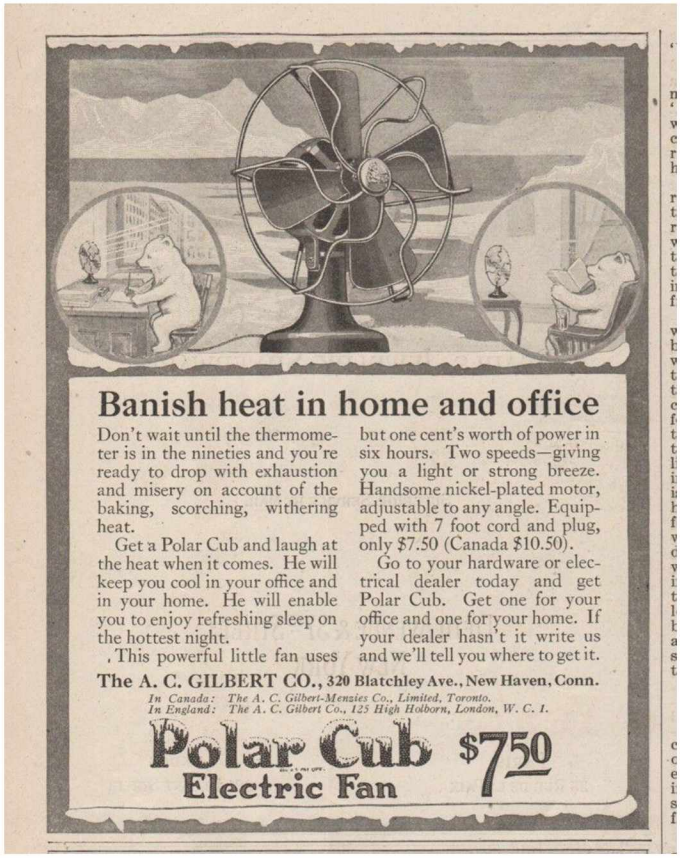
[41] Ibid., 983.

his lips in anticipation of a meal with his suited friends. All three of the bears smile while watching the fish cook, yet not a single tooth or fang is visible. The caption reads: "The Roosevelt Bears on the Iceberg. 'Teddy-B put a match to a pile of wood and made a fire and cooked the food.'" Like the ad for the wool vests, the three characters in this image share an experience: cooking and the anticipation of enjoying a warm meal. The bears in this ad are not only shown as appreciating and engaging in human activities and pleasures (fire, food with friends) but are actively drawn with human mannerisms, postures, and clothing likely inspired by their presidential namesake, and the stuffed toys so popular during the decade. The two well-dressed bears bridge the divide between wild animal and human. No element of ferocity colors the scene—the bears more closely resemble children's toys and humans than wild animals.

No. 14. The Roosevelt Bears on the Iceberg.
"TEDDY-B put a match to a pile of wood
And made a fire and cooked the food."

From author Seymour Eaton's illustrations of "Teddy-B and Teddy-G", ca. 1905.

As America progressed into the midcentury, infinite innovations transformed the world. "What an age!" marveled a columnist for *Advertising and Selling* in 1927. "Photographs by radio. Machines that think. Lights that pierce fog…Vending machines that replace salesmen. . . The list of modern marvels is practically endless."[42] As the imaginations of engineers guided America through the war years and into the modern age, a series of environmental disasters and catastrophically destructive scientific advancements began to dampen the seemingly relentless optimism surrounding scientific progress. Starting with the Dust Bowl of the 1930s, progressing through the atomic age, and culminating in the wake that followed Rachel Carson's groundbreaking 1962 book *Silent Spring*, new questions regarding stewardship and environmental responsibility entered the public consciousness.



Example of an anthropomorphized polar bear enjoying the cooling effects of technology. A.C. Gilbert Co. ad from 1920.

[42] Roland Marchand, *Advertising the American Dream: Making Way for Modernity 1920-1940* (Berkeley, Los Angeles, and London: University of California Press, 1985), 1.

Man as Environmental Steward

Economic and ecological disasters beset Americans during the 1930s. The stock market crashed in 1929 and nature appeared to rebel: drought plagued the Great Plains, floods raged in the Mississippi Valley, and soil erosion degraded the production of farms throughout the nation.[43] The terrible dust bowl of the 1930s filled American newspapers with stories and images of a land gone sterile and people in desperation. As New Deal policies strove to put Americans back to work, narratives about the American landscape changed. "Nature has again been good enough to warn us," as ecologist Paul Sears explained in 1936, "by a perfectly synchronized drama of dust-storms in the West and disastrous floods in the East, of the wrath that is brewing against our western civilization unless we mend our ways."[44] The investigation conducted by Franklin D. Roosevelt's Great Plains Committee reached similar conclusions: "It became clear that unless there was a permanent change in the agricultural patterns of the Plains, relief always would have to be extended whenever the available rainfall was deficient."[45] The Dust Bowl occurred because humans insisted on imposing their linear notions of progress on the cyclical drought patterns of the Plains.[46] The idea that poor farming practices and mismanagement of the land—that is, human settlement and activity—had caused one of the worst ecological disasters in history pushed America into a new environmental consciousness. Technology had collapsed distances and conquered many natural challenges, but it could also generate widespread catastrophe.

With the Second World War, progress in powered flight, warfare, and communications abounded. Ships and airplanes went farther and faster carrying greater and greater firepower. Rockets

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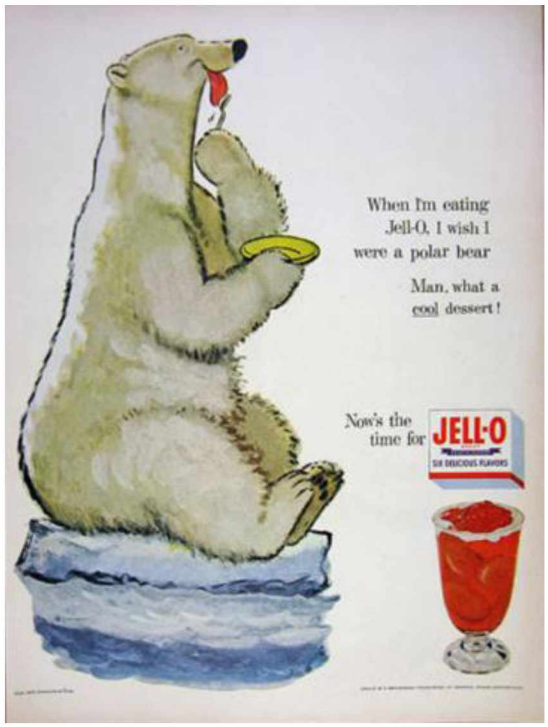
[43] Finis Dunaway, *Natural Visions: The Power of Images in American Environmental Reform* (Chicago: The University of Chicago Press, 2005), 34.
[44] Paul B. Sears, "Floods and Dust Storms," *Science*, 27 March 1936, 9.
[45] "The Future of the Great Plains: Report of the Great Plains Committee," (Washington 1936), 1.
[46] William Cronon, "A Place for Stories: Nature, History, and Narrative," *The Journal of American History* 78, no. 4 (1992).

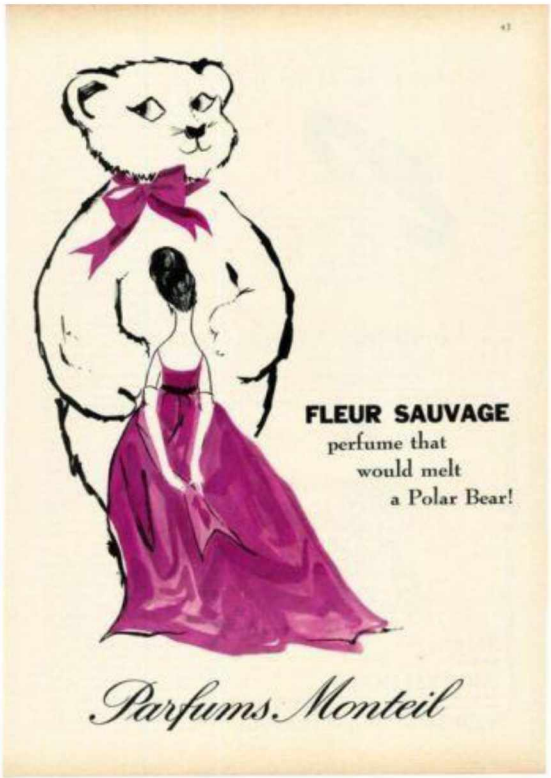
and atomic weapons put humanity at risk as never before. With the destruction of Hiroshima and Nagasaki in 1945, a new age was born. And yet despite the destruction and bloodshed of the war, optimism prevailed. With the return of soldiers to civilian life, American production and consumerism flourished and a post-war baby boom continued through the 1950s.

Images of the polar bear through the midcentury reflected increasing interest and access to consumer goods and activities. The polar bear continued to be used as a trade character to represent cold products in advertisements and was further anthropomorphized. Popular brands such as Jell-O used the polar bear as a smiling and lovable character enjoying the refreshing taste of its dessert. One Jell-O ad with a round happy bear holding a yellow plate and licking a spoon read, "When I'm eating Jell-O, I wish I were a polar bear. Man, what a cool dessert!" These cartoon ads attributed human qualities to the bears, making the Arctic animal friendly and relatable to consumers. The polar bear also started to emerge in women's advertising as a playful and cuddly companion, again playing off themes of cold, melting hearts, etc. One 1954 ad for Maidenform featured a polar bear playfully sneaking up behind a shirtless woman and covering her eyes. A Parfums Monteil ad from the same period showed a fashionable woman in a coquettish stance facing a polar bear that more closely resembled a kitten than a predator. Its caption read, "perfume that would melt a polar bear!" Both ads conveyed a sense of playful sexuality. The bears stood as docile, toothless, and cuddly companions—appropriate and non-threatening enough to sell women's perfume and underwear.

Maidenform advertisement, c 1954



Jell-O advertisement, c 1950



Parfums Monteil, c 1950

In contrast to its popularity as a cuddly trade character, real polar bears across the circumpolar north were prized hunting trophies through the 1960s. Hunting polar bears was big business; flights, hotel and restaurant fees, outdoor gear, cameras, and guns all contributed to the exchange of money in connection with bear hunting. In 1965 alone, the harvest of an estimated 300 polar bears in Alaska contributed approximately $450,000 to the state's economy, equivalent to roughly $3.5 million today.[47] Each polar bear harvest contributed an estimated $2,000 ($15,800 today) to the state's economy.[48] Hunting by aircraft significantly reduced the time needed to find and stalk a bear, making the Arctic expeditions accessible to more hunters.

Mary Jean Kempner wrote an homage to what she described as the "aristocratic" polar bear for *Harper's Magazine* in 1963, titled "The Ice Tiger." In the article, she explained the process of commercially hunting polar bears with great disdain. "Today a tycoon can fly by jet from New York to Anchorage," she wrote, "take a short hop to Kotzebue, spend the night in a hotel, kill a bear the next day, and be back at his desk all in the course of a long weekend. Promoted as 'trophy hunting' by Alaska's Tourist Bureau—and as sporting as shooting fish in a barrel—a kill is practically assured for a not inconsequential price tag."[49]

Commercial furriers sold polar bear pelts as rugs, blankets and other luxury items; these were especially popular among tourists visiting Alaska by steamship and eventually by plane. The polar bear had been completely commercialized in American culture. It was both an endearing advertising trade character and consumable commodity.

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[47] *Proceedings of the First International Scientific Meeting on the Polar Bear : Held at the University of Alaska, Fairbanks, Alaska, U.S.A.*, (Washington: U.S. Dept. of the Interior, Bureau of Sport Fisheries and Wildlife, and the University of Alaska, 1966), 44.
[48] Ibid.
[49] Mary Jean Kempner, "The Ice Tiger," *Harper's Magazine*, August 1963.

Kotzebue, offloading a polar bear skin. Steve McCutcheon Collection, Anchorage Museum at Rasmuson Center

Alaska Fur Factory, Anchorage, AK c. 1955
William L. McNutt photographic slides, University of Alaska Anchorage

In high demand and no match for post-war technologies like powered flight and high-powered rifles, polar bear populations began to dwindle world-wide as hunting continued to increase. Game management officials faced a crisis of ignorance, a desperate lack of information. They knew very little about polar bear life cycles, physiology, mating, and denning behaviors, and population estimates were extrapolated guesses at best. To address rising concerns, an international conference was called in accordance with the United Nations resolution designating 1965—the twentieth anniversary of the United Nations—as International Cooperation Year (ICY). Scientists and conservationists from Canada, Denmark, Norway, the U.S.S.R., and the United States gathered in Fairbanks, Alaska, September 6-10, 1965, in the First International Scientific Meeting on the Polar Bear. According to the published proceedings, the meeting was held "to permit scientists and conservationists from interested Arctic nations to meet to discuss the future of the magnificent polar bear which inhabits the Arctic Polar Basin and roams at will without regard to national boundaries."[50] Given the Cold War politics of the time, the presence of the U.S.S.R. at a meeting hosted by the United States was an unprecedented show of cooperation—one that did not go overlooked in the event's opening remarks. As C. Edward Carlson, temporary chairman of the meetings from the United States, declared: "I take great pride in saying that my Government has taken this resolution seriously. For we do not regard ICY merely as a year of celebration, but also as one of constructive work."[51]

Attitudes about man's role in environmental conservation and stewardship were shifting, as evidenced by the conference proceedings from this notable meeting focusing on the polar bear. The nuclear age, the escalating arms race, and fears of mutually assured destruction had planted the seeds of global citizenship and environmental stewardship in the public consciousness. Americans had been

[50] *Proceedings of the First International Scientific Meeting on the Polar Bear : Held at the University of Alaska, Fairbanks, Alaska, U.S.A.*, iii.
[51] Ibid., 1.

bombarded by advertising and public education campaigns meant to prepare them for the dangers of nuclear fallout. These great spectacles of human technology and disaster—the mushroom cloud, for example—made clear that American bodies were now also at risk of damage and contamination by the very science developed to make life safer, faster, and better. Concerns over the lasting effects of fallout, chemical toxins, and pesticides like DDT in the environment escalated after Rachel Carson's book *Silent Spring* brought environmental concerns to the forefront. If pesticides in the environment killed birds and other animals, how did they affect the public? What were contaminants doing to American children?

In his opening address at the Fairbanks conference, Alaska U.S. Senator E.L. "Bob" Bartlett described the polar bears as "stately and stateless" and expressed his hopes "that man can take steps to insure a future for this proud animal." Bartlett characterized the bear as a global citizen, one worthy of protection via global cooperation: "Because the creature, man, is involved with all nature and all life, the death of any species would thus diminish mankind."[52] Vanishing species such as the passenger pigeon, the whooping crane and the bison generated awareness and support for species and habitat conservation; and the Endangered Species Act and Marine Mammal Protection Act would come to pass within a decade. Bartlett's opening address directly reflected the growing belief in man's moral obligation to environmental stewardship and the critical role it played in the survival of humanity.

"The perception of beauty is a moral test," Bartlett declared, quoting Henry David Thoreau, "and this conference, in its way, suggests a moral issue. No great civilization will stand or fall because of any concern for the polar bear in and of itself. Greatness appears when man is able to share beauty and preserve nature in concert with his fellow man. If man can still take the time to see and understand the dignity and magnificence and uniqueness of polar bears, there is a good chance that man will meet

[52] Ibid., 4.

and pass the necessary moral test."[53] Rising to meet this moral duty, the five participating Arctic states agreed that current scientific understanding was an inadequate foundation for sound management policies, and they drafted rigorous research initiatives. The final accord of the proceedings emphasized the necessity of cooperation and the prompt exchange of research and management information as it became available.

In the decades that followed, polar bear research increased in response to conference initiatives and international cooperation. Popular national magazines like *National Geographic*, *Harper's Magazine*, and *National Wildlife* featured stories and images of darted and docile polar bears in the capable hands of men and women of science. Through these images, the American public witnessed research projects rising to meet the moral obligation to protect species diversity, the environment, and ultimately themselves. These images revealed wildlife biologists interacting with the animal in a manner that positioned humans as dominant and *responsible for* the animal's well-being, with technology again shifting the human-nature balance.[54]

Polar bear weighing, c. 1965. Alaska Department of Fish and Game

Polar bear weighing, c. 2015. Photo courtesy of Todd Atwood at the Alaska Science Center

[53] Ibid., 4-5.
[54] Kristoffer Archibald, "From Fierce to Adorable: Representations of Polar Bears in the Popular Imagination," *American Review of Canadian Studies* 45, no. 3 (2015): 266.

Elements of the technological sublime permeate these visual narratives. Helicopters, planes, high-powered tranquilizing rifles, radar, and tracking technologies easily overcame the harsh Arctic environment and enormous predatory bears. Images of darted, unconscious bears featured biologists with their hands in the bears' mouths to extract a single tooth to determine the bears' ages. Others showed biologists weighing bears by hoisting them up in nets by helicopters. As one 1971 *National Geographic* describes, "Helpless as a toy, half a ton of flesh and fur swings from a boom."[55] Such images would first shock viewers with the enormity and proximity of the predator to the scientist, but this fear would give way to pride in man's ability to subdue the ferocious in order to protect it. Helpless in the face of technology, the bear's wildness dissipated. Unconscious out on the tundra, the bears became more like large dogs or teddy bears than wild Arctic monarchs. Images of conscious polar bears reinforced this narrative, too, often highlighting the curious and playful nature of young bears or the motherly instinct of a sow with her cubs, instead of the bear's deadly hunting techniques or fierce territorial instincts. The visual stories of biologists strengthened the belief that polar bears could be placed under human control yet remain unharmed. These images express a redemptive quality and they relate an emotional interest story of man's ability to redress previous sins of over-hunting, pollution, and contamination through responsible science and technology.

In addition to the scientific polar cooperation throughout the 1970s and '80s, larger cultural and environmental regimes were shifting on an international stage. Under the supervision of the United Nations, UNESCO (the United Nations Educational, Scientific and Cultural Organization) began adopting agreements that further internationalized nature and solidified the regime of global citizenship, for instance with the 1972 Convention Concerning the Protection of the World Cultural and Natural Heritage. The convention conflated the concepts of culture and nature and demarcated a sweeping definition of heritage that transcended political and geographical boundaries: "each nation

[55] Thor Larsen, "Polar Bear: Lonely Nomad of the North," *National Geographic* 1971, 574-90.

holds in trust for the rest of mankind those parts of the world heritage that are found within its boundaries." The convention contended that outstanding natural resources should therefore be preserved as "part of the world heritage of mankind as a whole."[56]

As wild places became valued as global cultural heritage, so too did the animals within them. Protective federal policies followed suit in the United States. The 1970s ushered in an era of environmentally-minded laws and regulations, as well as research. Two landmark conservation acts became law in the 1970s: The Marine Mammal Protection Act (MMPA) of 1972 and the Endangered Species Act of 1973. The MMPA prohibited the harvesting of polar bears and other marine mammals including whales and seals, "in U.S. waters and by U.S. citizens on the high seas, and the importation of marine mammals and marine mammal products into the U.S."[57] An international agreement followed in 1973 between the United States, U.S.S.R., Norway, Canada, and Denmark to ban all hunting of the polar bear, with exceptions made for indigenous harvest in Alaska and Canada. New norms stressed resource restraint in addition to sound management. In the following decades, the United States entered two more agreements pertaining to the management of polar bears: the 1988 Inuvialuit-Inupiat Polar Bear Management Agreement in the Southern Beaufort Sea; and the 2000 U.S. – Russia Bilateral Agreement coordinating management of the shared Alaska-Chukotka polar bear population.

With the new millennium came new fears for the future of humanity. Scientists world-wide raised alarms regarding increasing numbers of extreme weather events and sea level rise, including a high-profile panel of scientists convened by the United Nations who, in 2007 released its sobering report about the unequivocal certainty of climate change and its projected effects.[58] With rapid globalization the entire world was industrializing. The planet's population doubled in 40 years, from

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[56] Peter Coates, "Creatures Enshrined: Wild Animals as Bearers of Heritage," *Past and Present* 226 (2015): 280-81.
[57] "Marine Mammal Protection Act," NOAA Fisheries, http://www.nmfs.noaa.gov/pr/laws/mmpa/.
[58] Mooallem.

three billion in 1960 to six billion in 1999. Human produced CO_2 was intensifying the greenhouse effect and warming the climate at unprecedented rates – raising new questions about man's role in environmental degradation, preservation, and the suite of social and environmental justice issues contained therein.

Diminishing sea ice, melting permafrost and retreating glaciers placed the Arctic squarely at the center of global climate change dialogues, but scientists and environmentalists alike struggled to adequately communicate the long-term and world-wide impacts of a warming climate to citizens and policy makers. Unlike the concrete, dramatic and immediate effects of nuclear fallout or environmental contaminants, greenhouse gas emissions are largely invisible and their damaging effects—being cumulative across a long timescale—were not tangible to most Americans, including decision makers. In the early 2000s, environmental lawyers striving to convince the George W. Bush administration to regulate greenhouse gases turned to the Endangered Species Act and the polar bear.

The Endangered Species Act allows the government to allocate resources to the recovery of imperiled plant and animal species, including the protection of habitat. In addition to banning the killing, harassing, or shipping of protected species across state or international borders, it requires government agencies to insure that activities—from building to bomb-testing—do not endanger them further. A coalition interested in curbing climate change through regulating emissions petitioned to list the polar bear under the Endangered Species Act, a public-relations tactic that marked the beginning of the polar-bear-as-climate-victim narrative that now predominates.

Lawyers from the Center of Biological Diversity recognized the magnetism of the polar bear and its ability to garner public support.[59] They argued that climate change imperiled the bear; the warming climate was melting Arctic sea ice, threatening the species' survival. Listing a species under

[59] ibid.

the Endangered Species Act must be based on the "best available science," a critical point for environmental lawyers. Because the Bush administration had refused to clearly acknowledge the role of greenhouse gas emissions in climate change, the publicity garnered by the petition simultaneously forced the government and the American public to acknowledge the most credible climate science, and in the process created a new perception of the polar bear: climate change victim.

Images of starving or exhausted bears entered the public lexicon. Views of the solitary bear, living alone on the ice pack, amplified the emotional impact of climate change. Psychology studies on the "identifiable victim" effect suggest that the emotive or affective feeling is greatest when a subject or individual is featured alone. This effect begins to decline at two, and completely collapses in depictions of larger groupings, at which point 'psychic numbing' leads to apathy and inaction.[60] Images of the solitary polar bear allow viewers to identify with the bear and more readily relate to its struggles and suffering.

Al Gore's 2006 film *An Inconvenient Truth* vividly illustrates this anthropomorphic emotive effect. Faced with the challenge of communicating the long-term impacts of climate change to a public that found the issue too far removed temporally and otherwise, *An Inconvenient Truth* included an animated sequence in which a polar bear tries, repeatedly and unsuccessfully, to climb onto chunks of ice. The animated creature seems doomed to drown. This imagery fuses fact with feeling, prompting viewers to see global warming as an imminent reality through the polar bear, and to connect to an issue that previously seemed too far removed from their everyday experience and environment.[61] The bear's suffering made the gradually escalating problem of climate change appear immediate and present, rather than distant and vague. Similarly, *Time* Magazine issues from the early 2000s drew a direct relationship between the fate of the polar bear and the fate of humanity, running cover stories

[60] Kate Manzo, "Beyond Polar Bears? Re-Envisioning Climate Change," *Meteorological Applications* 17 (2010).
[61] Finis Dunaway, *Seeing Green: The Use and Abuse of American Environmental Images* (Chicago: University of Chicago Press, 2015).

featuring singular polar bears out on ice. The warnings were blunt. One cover from September 2000 featured a solitary bear overlooking an ice cliff, with nowhere to go. "This polar bear's in danger, and so are you." Another *Time* cover from 2006 had a polar bear looking to get off a melting ice floe. "Be worried. Be very worried," read the headline. In smaller font underneath it continued: "Climate change isn't some vague future problem – it's already damaging the planet at an alarming pace. Here's how it affects you, your kids and their kids as well."

Time cover from September 4, 2000

Time cover from April 3, 2006

For the last one hundred years, the polar bear has predominantly acted as a symbol or trade character in commercial advertising. This use, and the ensuing anthropomorphizing of the polar bear, set the foundation for its rise and potent emotive effects as a climate symbol in the early 2000s. Commercial advertising had for decades associated the bear with useful products and beloved brand names, solidifying the bear into the emotive advertising gestalt of Americans everywhere. The North is no longer a fearsome and terrible place in the public imagination, but a fragile and vulnerable one, with the polar bear standing as its most defenseless inhabitant. Today's portrayals of the bear are emotionally impactful, terrible to behold, and hint at looming catastrophe that is beyond man's comprehension—all elements of the sublime that are worth examining in a new modern context.

The conflation of man and bear in Landseer's painting persists as a theme in images of the polar bear today. Just as the polar bears of "Man Proposes, God Disposes" forced British and American audiences to face mortality in the presence of indomitable nature, so too do today's images of the bear compel contemporary audiences to face mortality; but now, the role of antagonizer has been reversed. The suffering and ultimate demise of the bear implicate humanity, and through the bear's suffering viewers confront their own potential fate wrought not by the divine but by their own hand. The visual script of the sublime has flipped: God proposes, man disposes. Twenty-first century viewers see their own future in the face of the bear, acutely aware that their participation in the industrialized world could have lasting impacts for both the future of the bear and of humanity.

CHAPTER THREE
Symbol of Melt

> It is paradoxical that new opportunities are opening for our nations at the same time we understand that the threat of carbon emissions is imminent. [1]
>
> - Olafur Ragnar Grimsson, President of Iceland (1996-2016)

> Apart from uncertainty regarding the progress of climate change in the North, perhaps the greatest source of befuddlement is our proverbial desire to have our cake there and to eat it too.[2]
>
> - John McCannon, American Historian

By virtually any standard of measurement, the Arctic is hotter than ever before, physically, politically and emotionally. Rising oceans temperatures, opening sea lanes, disappearing pack ice and global fear of environmental devastation have combined to make the Arctic Ocean the great question mark about the future of the human species with *ursus maritimus*, the "sea bear," at least for now, standing in as a substitute for *homo sapiens*.

In human eyes the polar bear has long been a paradoxical creature, mirroring the same paradox at the center of America's relationship to the Arctic today, with the region seeming to offer two widely divergent paths to the future. Stretches of uninterrupted ecosystems and wilderness areas are framed as resource warehouses on the one hand, or sacred environmental preserves on the other, pitting historical frontier identities against moral obligations to future generations. Both perspectives see the Arctic as an answer to the ills of the modern world, either promising deliverance from future energy crises and resource shortages, or further instances of environmental and moral degradation. These conflicting visions of the Arctic ice pack and the bears who live there also symbolize the frequent tension between the ideals of global citizenship and the reality of consumerism. The polar bear—in its transition from ferocious to vulnerable, from a symbol of cold to a symbol of melt—illuminates

[1] Andrew E. Kramer, "Warming Revives Dream of Sea Route in Russian Arctic," *New York Times*, October 17 2011.
[2] John McCannon, *A History of the Arctic: Nature, Exploration and Exploitation* (London: Reaktion Books Lid., 2012), 306.

the shifting historical perspectives of humanity's environmental responsibilities and the roots of this ideological divide. The following chapter explores how various stakeholders have used polar bear imagery to frame Arctic and environmental issues to shape public perceptions and sell specific ideologies. Image and discourse analysis, communications theory, and semiotic theory reveal how the polar bear became a symbol of melt.

As a charismatic but contentious symbol, the polar bear illustrates the ideological conflict over climate change between competing stakeholders, which deliberately frame their perspective to appeal to either the citizen identity or the consumer identity. Formally, the act of framing may be defined as "conscious and strategic efforts by groups of people to fashion shared understandings of the world and of themselves that legitimate and motivate collective action."[3] Framing processes help draw boundaries around a given problem, outline its causes, and, most importantly, identify responses or remedies. Framing a complex issue like climate change increases its accessibility and saliency to policy makers and the public alike, functioning to highlight linkages between issues and thereby galvanize political action. Framing occurs through all forms of media— including photographs, charts, graphs, cartoons, illustrations, and moving images—and spreads through magazines, television, films, radio, the ever-growing number of websites and ubiquitous social media platforms.

With countless images now available in the palm of our hands, it is more important than ever to recognize that despite the old adage, seeing is not believing. As Susan Sontag famously states in *On Photography:* "photographs are as much an interpretation of the world as paintings and drawings are."[4] Problem definition itself *is* a process of image making, through which the images attribute cause, blame, and responsibility. Because climate change in the Arctic remains abstract and distant to the vast

[3] Kate O'Neill, *The Environment and International Relations*, Themes in International Relations (Cambridge, UK ; New York: Cambridge University Press, 2009), 31.
[4] Susan Sontag, *On Photography* (New York: Straus and Giroux, 1977), 6-7.

majority of Americans, widely distributed and carefully honed imagery plays a vital role in framing public opinions about this sparsely inhabited and mysterious region at the top of the globe.

The southern world has generally never had a clear picture of Arctic realities. "If the average American or European university graduate has ten ideas about the North," explorer Vilhjalmur Stefansson famously wrote in 1922, "nine of them are wrong."[5] According to Stefansson, the Arctic was encircled by a "wall of ignorance" that locked it away from the rest of the world. To varying degrees the northern "wall of misinformation" he described remains a formidable obstacle to understanding the Arctic. For example, a 2006 General Social Survey questioned a representative sample of more than 1,800 U.S. adults about their knowledge and opinions concerning the polar regions. Polar knowledge among adults proved to be limited, with some 25% of respondents answering, "don't know" to the true/false statement "sun never shines at South Pole" and 8% answering "true."[6]

Arctic confusion has helped shape the ongoing debate and controversy surrounding the Arctic National Wildlife Refuge (ANWR, the refuge). Because Americans prove relatively uninformed about the Arctic, they are highly susceptible to changing their opinions regarding oil and gas development in ANWR based on the framing of survey questions.[7] The strong and demonstrable effects of framing on polling responses led the staff at the Environmental News Service to complain, "you get what you poll for."[8]

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[5] Vilhjalmur Stefansson, "The North That Never Was," in *The Northward Course of Empire.* (New York, NY: Harcourt Brace & Company, 1922).
[6] Lawrence C. Hamilton, "Who Cares About Polar Regions? Results from a Survey of U.S. Public Opinion," *Arctic, Antarctic, and Alpine Research* 40, no. 4 (2008): 671.
[7] Ibid.
[8] David W. Moore, "Conflicting Polls Show an Uncertain Public on A.N.W.R.," (news.gallop.com: Gallup, 2005).

Understanding Framing Effects: The Arctic Refuge

As in any political campaign, unbiased analyses about Arctic drilling are difficult to find. Some economic studies demonstrate that ANWR's oil reserves will save America from future high oil prices and foreign oil dependency. Some support the contrary. Some environmental impact studies conclude that oil and gas development would be disastrous for the Porcupine Caribou herd and vulnerable polar bear populations, and other studies conclude responsible practices would result in negligible effects. Reliance on this contradictory evidence about a place few will ever see or understand can hardly encourage a nuanced or rational debate. Under these circumstances, emotional arguments and images compete over whether drilling for oil should be permitted, with the stakes being nothing short of life or death on either side, no matter if the goal is to protect pristine lands for future generations, or to ensure the economic security of the United States.

Opinion polls conducted in the early 2000s regarding U.S. energy policy and opening the Arctic National Wildlife Refuge to oil development clearly demonstrate the potent effects of framing to sway participants one direction or another. Survey researchers frequently asked Americans whether they supported an increase in domestic oil production. The results ranged wildly, affected by a number of framing factors. When framed as a way "to reduce the country's dependence on imports of Middle East oil," 73 percent approved of "increasing oil drilling in the U.S."[9] However, support for drilling diminished when the question was reframed to balance national security concerns with reminders of environmental impacts, or when pollsters encouraged respondents to consider "other solutions," like energy conservation.[10] Interest in expanded oil production also waned when attention shifted from the general to the specific. Respondents endorsed drilling when the location was vaguely defined within U.S. borders, but they expressed reluctance to support it in any number of places mentioned

[9] Deborah Lynn Guber and Christopher Bosso, "Framing A.N.W.R.: Citizens, Consumers, and the Privileged Position of Business," in *American Political Science Association* (Washington, D.C. 2005), 9.
[10] Ibid.

specifically by name, including public lands in the Rocky Mountains, the Great Lakes, Florida's Gulf Coast, or, most notably, Alaska's Arctic National Wildlife Refuge.[11]

Given the powerful effects of framing, unsurprisingly, opponents and proponents of opening the Arctic National Wildlife Refuge to drilling employ images that appeal to one or the other side of the citizen-consumer divide. When oil prices spiked during the George W. Bush administration, pro-drilling interests effectively used the narrative "American consumers are paying the price" for keeping ANWR protected.[12] They assigned blame for the high cost of gas to Congress and partisan politics. This rhetoric amplified after the terrorist attacks on September 11, 2001 and found new strength under the frames of "energy security" and "national security." A fearful American public found great consumer appeal in the positive frames of "freedom," "choice," and "security" regarding drilling in the refuge. Similar frames have found new strength under the Trump Administration: policies which could encourage deregulation and greater domestic production, while conceivably easing the State of Alaska's ongoing fiscal crisis.

Several tactics characterize pro-industry images: high altitude shots that diminish detail, prevalent use of winter images, and large groups of animals co-mingling with oil and gas infrastructure. The messages downplay the fragile ecosystem of the coastal plain by removing environmental details like plants and small animals, focusing on the winter months, and emphasizing the peaceful (and plentiful) coexistence of animals with roads, pipelines and drilling platforms.

Pro-development images deliberately minimize the ecological and environmental significance of the Arctic coastal plain. These images seem to imply that development of this zone will not compromise any "national treasures" currently protected under federal law. Images of animals and industry thriving together respond to concerns for the well-being of the Porcupine Caribou herd.

[11] Ibid.
[12] Ibid.

Even the use of the acronym "ANWR" – pronounced "an-waar"- represents a deliberate framing decision, purposefully divorcing the region from the emotional associations of "wildlife" and "refuge," which suggest *sanctuary*.

While pro-development campaign literature generally looks north over the featureless coastal plane, images used by environmentalists typically face south, capturing the mountain range in the summer with a variety of flora and fauna. The images depict caribou, polar bears, wolves, migratory birds, grizzly bears, and more, in a manner consistent with the "identifiable victim" effect, featuring a single animal or pair of animals at a time. Psychological studies suggest that images of single individuals or animals evoke the greatest emotive or affective feeling, while the affect begins to decline at two or more and completely collapses in larger groupings, at which point "psychic numbing" or "turning off" leads to "apathy and inaction."[13]

These photographs capture intimate moments amid the landscape or between animals, and sweeping vistas showcasing the refuge's abundant wildlife. They evoke tenderness, empathy, awe and reverence in the viewer and provide a face to what is at stake. The Arctic Refuge that opponents of oil and gas development present could not be farther removed from Senator Frank Murkowski's blank piece of paper. For environmentalists, the refuge is a place of unparalleled natural wonder. Protecting it from exploitation in perpetuity is a moral imperative. Development of the coastal plain would fundamentally change the wildness of the entire refuge, they argue, at a cost that would greatly outweigh any short term monetary benefit.

Opponents of oil and gas development make an emotional and spiritual appeal to civic-minded citizens, claiming the refuge is an untainted natural paradise, "a sacred domain not yet corrupted by

[13] Kate Manzo, "Beyond Polar Bears? Re-Envisioning Climate Change," *Meteorological Applications* 17 (2010): 198.

civilization."[14] They argue that this is where its real value lies, not in hydrocarbon production or oil and gas revenues. The frame places the onus of responsibility on the American public to do their civic duty and protect the priceless landscape, whose value cannot be calculated with money. Not only does this message appeal to the citizen's emotions, it actively shames the consumer.

Increasingly, this narrative has amplified and broadened in the twenty-first century as international attention shifts to the impacts and causes of global climate change. The Arctic National Wildlife Refuge, as a pristine place in the region of the world experiencing the effects of climate change most acutely, has come to symbolize the politicized tensions between economic development and environmental protection—that is, the tension between being the global consumer and the global citizen. In the eyes of conservationists, the battle to stop Arctic drilling has become the front line of the campaign to protect the world from global climate change, the poster case for increasing energy efficiency, alternative energy sources, and reducing our carbon footprint. Although they continue to emphasize the value of wilderness in framing their arguments, linkages with broader concerns of climate change have enhanced their cause's political saliency.

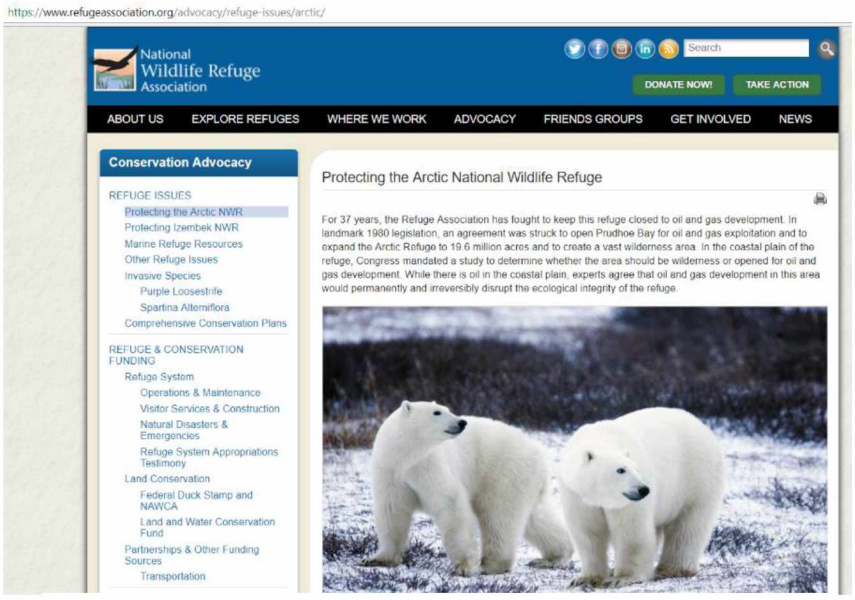
In previous ecological conflicts in Alaska going back to the discovery of oil at Prudhoe Bay in the 1960s, environmental activists repeatedly compared the future of the caribou to the decimation of the buffalo herds in the nineteenth century. The omnipresent image of caribou-as-buffalo, according to historian Peter Coates, was said "*ad nauseum*" at every public hearing during the debates leading up to passage of the 1980 Alaska National Interest Lands Conservation Act (ANILCA), the measure which codified the existing parameters of the Arctic National Wildlife Refuge. In that contest the

[14] Finis Dunaway, "Reframing the Last Frontier: Subhankar Banerjee and the Visual Politics of the Arctic National Wildlife Refuge," review of Arctic National Wildlife Refuge: Seasons of Life and Land, Gail H. Hull, *American Quarterly* 58, no. 1 (2006): 162.

environmentalists pleaded with the U.S. government to "ensure that Alaska's caribou did not suffer the historic fate of the buffalo."[15]

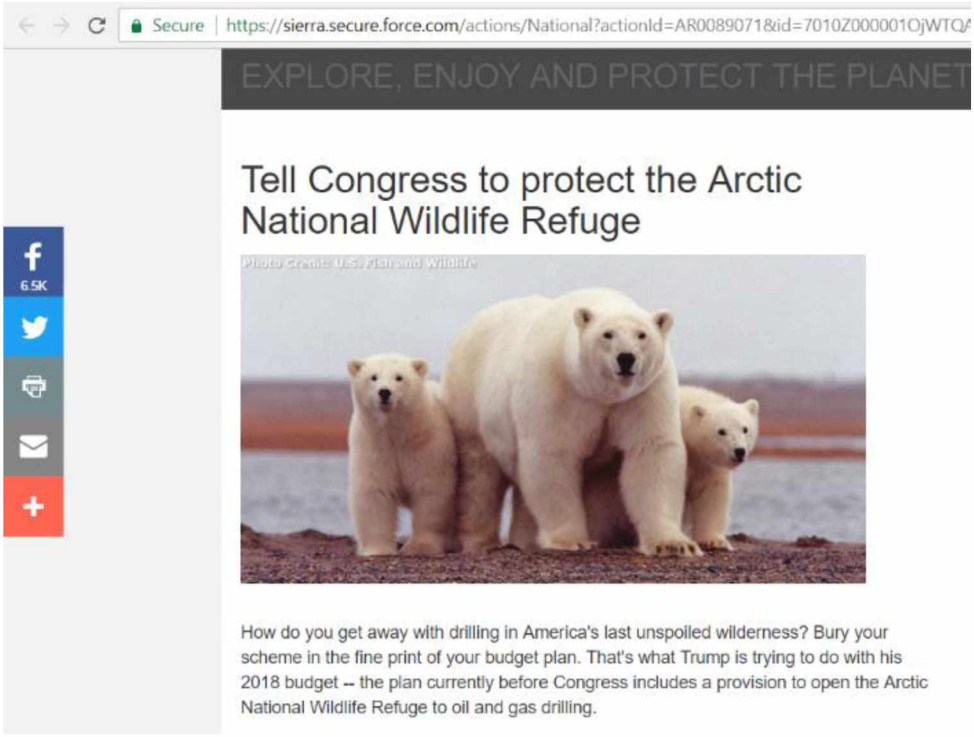
As the signature species of the Arctic Refuge the caribou was a logical choice, because the area proposed for oil development along the coastal plain is the calving ground of the Porcupine Caribou herd. But in the past decade the caribou trope of the 1980s has faded as the fight over the development of ANWR has gone global. Conservationist imagery no longer identifies the Porcupine Caribou herd as the most vulnerable victim of oil and gas development. Marketing campaigns have shifted to the most iconic victim of global climate change: the polar bear.

As the Arctic warms and changes, the polar bear stands as the ultimate identifiable victim. The bears - dependent on the pack ice - face mounting travel and hunting challenges as their frozen habitat disappears. The image of a solitary, exhausted or starving megafauna has become the most recognized casualty of global climate change. Nearly every pro-protection website for the refuge features a full page spread on the polar bear.



Screenshot from refugeassociation.org

[15] Peter A. Coates, *The Trans-Alaska Pipeline Controversy: Technology, Conservation, and the Frontier* (Fairbanks: University of Alaska Press, 1993), 308-09.



Screenshot from sierraclub.org

Screenshot from alaskawild.org

Without mandated permanent federal protection, the Arctic National Wildlife Refuge remains a political hotspot. By framing the Arctic Refuge as the battleground for an impending global crisis, opponents of developing ANWR have capitalized on the political sway of an international movement to strengthen their appeal to the civic-minded identities of the American public.

Selling the Polar Bear, Buying Salvation

As natural heritage sites and wildlife became increasingly understood as globally-owned resources – that is, as globalization shifted environmental thought beyond national boundaries – consumer preferences and demands changed. By the 1990s, polls indicated that companies' environmental records influenced consumer purchases.[16] Sustainability practices mattered to consumers. Following decades of environmental disaster images broadcast directly into living rooms, from the Cuyahoga River's catching on fire in 1969 to the Exxon Valdez oil spill in Prince William Sound in 1989, environmental protection increasingly became a universal moral obligation.[17]

In the shift from national to global environmentalism, the polar bear became "living heritage," a process assisted, as environmental historian Peter Coates suggests "by the fairly widespread perception that polar regions elude national ownership and are the ultimate global commons."[18] To lose the polar bear to extinction due to environmental degradation would be a loss for all humankind, akin to destroying Leonardo Da Vinci's *Last Supper*. "As such" Coates explains, "this bear is studied, protected, appreciated, and commoditized by an international fraternity of scientists, nature preservation organizations and nature importing tourists."[19] Just as commercial advertising of the early

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[16] Jack Doyle, "'Enviro Imaging' for Market Share: Corporations Take to the Ad Pages to Brush up Their Images," in *Not Man Apart* (Friends of the Earth, 1990).
[17] Walker Kent and Wan Fang, "The Harm of Symbolic Actions and Green-Washing: Corporate Actions and Communications on Environmental Performance and Their Financial Implications," *Journal of Business Ethics*, no. 2 (2012).
[18] Peter Coates, "Creatures Enshrined: Wild Animals as Bearers of Heritage," *Past and Present* 226 (2015): 294.
[19] Ibid.

twentieth century incorporated popular Arctic images and themes to catch the eyes of consumers, environmentalists and advertisers alike tap into emotional green and climate change sentiments to sell products and ideologies today.

Because of the bear's association with global climate change and related politics, the polar bear in the early twenty-first century has moved beyond basic consumer advertising and into the more complex arenas of corporate image and environmental activism. Environmental activists and commercial industries alike use the polar bear to communicate green sentiments to individual consumers. Both recognize the emotional appeal of the polar bear and use the animal in advertising to manipulate emotions to spur action, be it donating money to conservation efforts, purchasing a product, or in some cases both. World Wildlife Fund, Defenders of Wildlife, the Sierra Club, National Wildlife Foundation, Oceana, World Animal Foundation, and Polar Bear International – that's seven different conservation organizations – offer "adopt a polar bear" shopping choices through their online gift shops and fundraising efforts. By making a purchase or donation to one of these organizations, participants receive a plush toy polar bear and often a certificate. Shipping not included.

The new public discourse and market trend towards environmental sustainability incentivizes corporations to follow suit. As a result, new marketing strategies and initiatives have been developing since the 1990s to boost companies' public images and environmental reputations. In the rush to "green-up" corporate images, dubious tactics have naturally emerged, including greenwashing, the practice of using the symbols of "environmental concern" without taking any action to protect the planet.[20] One notorious example of green-washing from the 1990s was Chevron's "People Do" campaign which featured Chevron employees protecting a variety of charismatic animals including bears, butterflies, and sea turtles. Critics pointed out that many of the environmental programs promoted in Chevron's campaign were mandated by law and ignored or distracted from the company's

[20] Kent and Fang.

spotty environmental record, including its violations of the Clean Air Act, the Clean Water Act, and spilling oil into national wildlife refuges.[21] A 1989 advertising campaign by the chemical company DuPont followed a similar vein, featuring marine animals jubilantly clapping their wings and flippers in chorus to Beethoven's *Ode to Joy* in response to the company's new double-hulled oil tankers.[22] DuPont was the single largest corporate polluter in the United States in the early 1990s.[23] Absurdity aside, greenwashing campaigns are classic examples of misdirection. They shift the consumer's focus away from a company's actual environmental track record and redirect it toward periphery "feel-good" initiatives. Such maneuvers illustrate the fact that consumers *want* to feel good about the products they buy, and that companies have major profit incentives to ensure that they do.

The demonstrated power of the polar bear image reflects this truth: symbolic debates distract from the complex realities behind promotional campaigns. Emotional manipulation of American consumers lies at the heart of the argument made by environmental historian Finis Dunaway in his book *Seeing Green.* He argues that environmental messaging in the United States has been dominated by market forces and advertising – that American consumers are led to believe that the path to greater sustainability is through personal product choices and behavior only, rather than systemic change through regulation and policy. Dunaway sees the protection of the environment as a communal responsibility, like public schools or interstate highways but demonstrates how public advertising campaigns have historically blamed individual consumers for environmental degradation and thus have deflected attention from corporate and government responsibility.

For example, after 96 minutes of illustrating a catastrophic future of climate change impacts, Al Gore's *An Inconvenient Truth* ends with what Dunaway calls "a consumerist fantasy of green salvation

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[21] David C. Korten, *When Corporations Rule the World*, 2nd ed. (San Francisco: Berrett-Koehler Publishers, 2001).
[22] Ibid.
[23] Jack Doyle, "Dupont's Disgraceful Deeds: The Environmental Record of E.I. Dupont De Nemour," *The Multinational Monitor* 12, no. 10 (1991).

through carbon off-setting."[24] Food writer and environmentalist Michael Pollan explains that Gore's proposed solutions scared him more than the catastrophic imagery, commenting via his personal blog, "I don't know about you, but for me the most upsetting moment in *An Inconvenient Truth* came long after Al Gore scared the hell out of me, constructing an utterly convincing case that the very survival of life on earth as we know it is threatened by climate change" he wrote. "No, the really dark moment came during the closing credits, when we are asked to . . . change our light bulbs. That's when it got really depressing. The immense disproportion between the magnitude of the problem Gore had described and the puniness of what he was asking us to do about it was enough to sink your heart."[25]

Gore – through promoting the use of energy efficient light-bulbs, re-usable grocery bags, and hybrid vehicles – *equated* green consumerism with environmental citizenship, thus resolving the conflicting identities and providing the American public with feel-good product options that require no monumental changes in public policy or lifestyle. Similarly, companies world-wide can now buy their way into perceived environmental sustainability through the purchase of carbon off-sets, a voluntary program for companies and individuals alike that entails paying for activities that prevent emissions from other sources, or those that attempt to remove CO_2 from the atmosphere, rather than reducing one's own CO_2 emissions.[26] Many environmentalists argue that off-set programs are "band-aid" solutions that prevent funding and innovation capital from being invested in real emission reductions. Cheap carbon off-sets also depend on partnerships with developing nations, leading some critics to conclude that carbon off-set programs are little more than colonial profiteering.[27]

Whether energy efficient light bulbs, recycled plastic, or biodegradable cleaning items, evidence of products designed (or at least advertised) to fit green sentiments is found almost

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[24] Finis Dunaway, *Seeing Green: The Use and Abuse of American Environmental Images* (Chicago: University of Chicago Press, 2015), 271.
[25] Michael Pollan, "Why Bother?," *The New York Times Magazine*, April 20 2008.
[26] Jules Peck, "Forgive My Carbon Sin," *Ecologist* 38, no. 4 (2008).
[27] Ibid.

everywhere in the market. Consumers want to feel good about the products they purchase and use. The polar bear, as a victim of global climate change, taps into these emotional market drivers and serves to remind consumers of the effects of their participation in a fossil fuel-based economy. A market of "environmentally friendly" products allows consumers to alleviate the guilt often associated with this participation through perceived individual choice: Grocery shopping as daily environmental activism.

The roles of consumerism and capitalism in modern environmental activism leads many critics to implicate twentieth century neoliberalism in deterring collective action. According to critics, neoliberal environmentalism, that is – the movement to purchase our way as individuals toward a more sustainable future – is not conducive to fostering collective action and political pressure. This free-market approach, however, offers an appealing resolution to the conflict between consumer identities and citizen identities by moralizing individual participation in the free market. Purchase a plush polar bear to combat climate change.

Groups like World Wildlife Fund (WWF) and Greenpeace use the images of the polar bear extensively in their anti-Arctic drilling campaigns. Never mind the four million people who live above the Arctic circle whose lives would be disrupted and permanently changed due to off-shore oil development; it is the polar bear that has emerged as the poster-child of choice for environmental Non-Government Organizations (NGOs). Because the bear exists in the American imagination as a lovable and relatable trade character, consumers easily make the step to identifiable victim.

Environmental images of the polar bear are often up close, tight shots with the bear appearing to gaze directly at the camera lens and into the eyes of the viewer. Bears playing with one another, an affectionate moment between a sow and her cubs, or a gesture that easily translates to common human expressions, are all typical fare for these images with an environmental message. For instance, WWF's ad that reads, "What on earth are we doing to our planet?" features a bear covering his face as though in painful disbelief. Greenpeace International has staged numerous demonstrations world-wide featuring protesters dressed in polar bear suits, often carrying signs that say, "ARCTIC NOT FOR SALE." Humans dressed as polar bears, probably made with plastic, protest oil-fueled consumerism through the donning of a loveable trade character created by commercial industry. Such images demonstrate how dramatically our visual lexicon has changed since 1900.

Greenpeace protest outside of U.S. Whitehouse, 2013

WWF Ad Campaign, 2017

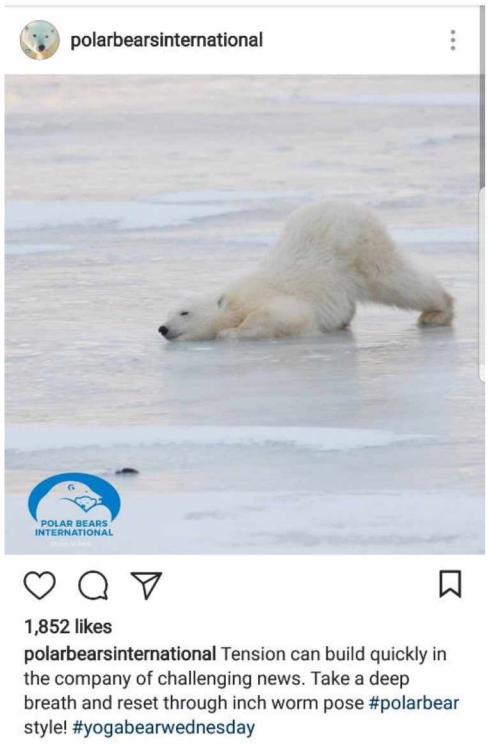
WWF Ad Campaign, 2017

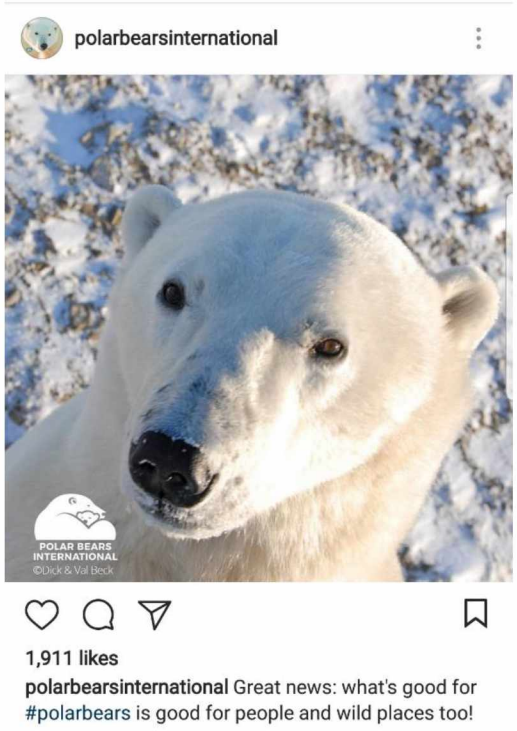
WWF's and Greenpeace's respective anti-drilling campaigns pit the survival of the polar bear against Arctic oil and gas development. These images also imply that by supporting Arctic oil and gas development, consumers are partially *to blame* for the suffering and decline of the polar bear. Churchill-based conservation non-profit Polar Bear International located on Hudson Bay in northern Canada takes a similar approach in their social media campaigns. Several times a week they ask followers what they (the viewers) are doing to save the polar bear. The bear is further anthropomorphized by linking the well-being of polar bears with the well-being of humans and vice-versa, posting contorted or resting polar bears for "yoga bear Wednesdays." Such tactics emphasize the responsibility individual citizens have to habitat and wildlife conservation.

While some of Polar Bear International's posts encourage community-based action ("We can address climate change by becoming involved in efforts in our own communities to shift to a renewable energy future"[28]), these posts predominantly target individuals to spur individual action. Polar Bear International, unlike WWF or Greenpeace, remains deliberately apolitical. It does not make

[28] Text quoted from a Polar Bear International Instagram post from March 12, 2018.

calls for political action (e.g. letter writing, protests, etc.) and regularly reminds followers that "Climate change isn't a left of a right issue. It's an issue that affects all of us."[29]





Through these marketing campaigns, the polar bear has become the "Smokey Bear" of the global climate crisis: "Only you can prevent global climate change." In the 1950s Smokey, like the polar bear, rose to environmental fame due to victimization. Fire crews responding to a large forest fire in the Capitan Mountains of New Mexico found the cub treed, separated from his mother, and badly burned in the spring of 1950. The crew retrieved the cub and flew him to Santa Fe where he received treatments for his injuries and a flurry of attention from the press. Smokey's story was broadcast nationwide, and letters of support flowed in. The state game warden presented the cub to the chief of the Forest Service and dedicated Smokey to a conservation and wildfire prevention

[29] Text quoted from a Polar Bear International Instagram post from March 26, 2018

publicity program. Smokey lived the rest of his life at the National Zoo in Washington, D.C.[30] The bear's message of "Only you can prevent forest fires!" exemplifies the tendency of environmental messaging in the United States to focus on the responsibility of individuals.

Little Smokey (Smokey's stand-in after his death in 1976), U.S. Department of Agriculture, c. 1975

Environmental salvation through individual consumer choice is most succinctly illustrated in a 2011 Nissan Leaf commercial. The commercial opens with a polar bear in the Arctic, surrounded by glaciers collapsing into the water. The bear rises, dives into the water and swims ashore. Accompanied by the emotional soundtrack of a single piano, the bear makes his way south through woods, highways, railroads and cities. The huge white predator is uncomfortably out of place in these scenes, drinking out of puddles and entering the urban environment. He eventually wanders into a tidy suburban neighborhood and up to a man about to leave for work in his electric vehicle. The bear rears up on two legs and embraces the man in a hug. The man leans in and returns the embrace. The scene is one of absolution, ending with a voice over saying, "Innovation for the planet. Innovation for all." The

[30] The Ad Council, "Story of Smokey," https://smokeybear.com/en/smokeys-history/story-of-smokey.

message is clear; spend your money on a Nissan Leaf, and both the polar bear and the planet will thank you.

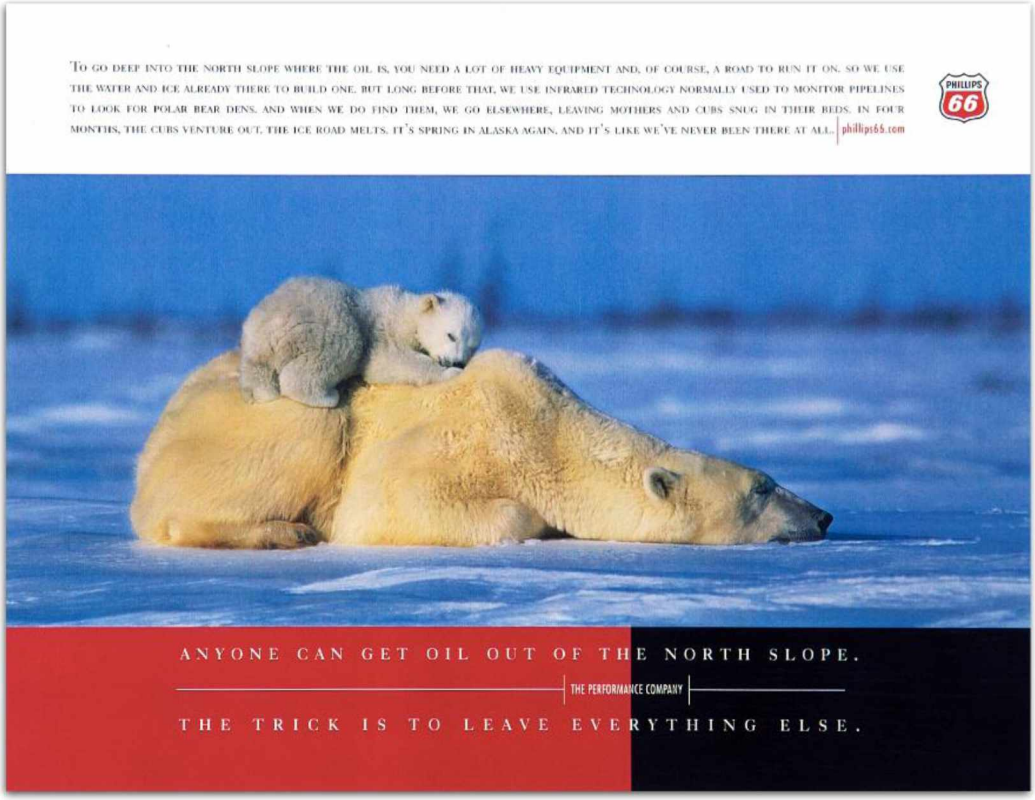
Still shot from 2011 Nissan Leaf Commercial

Companies employing green advertising have become somewhat more self-aware in recent decades. They recognize that ignoring the environmental and social impacts of their businesses risks damaging their reputations, which could potentially cripple their brands for years.[31] A 2006 article in the trade journal *Marketing Week* headlined, "Green is the Way to Go for Marketers." The article explains the economic incentives for adopting sustainable practices and emphasizes that "[t]he spread of 'green' issues into the mass market means clients and consumers will be looking to marketing to spread the word for ethical consumerism."[32]

Given the market growth in a host of sustainable brands and the organic food market in the last ten years, companies have monetary incentives to cultivate a business culture (or perceived

[31] Jules Peck, "Green Is the Way to Go for Marketers," *Marketing Week* 29, no. 19 (2006).
[32] Ibid.

business culture) of green or environmentally sustainable practices. Phillips Oil (now Conoco-Phillips) released an advertising campaign directly addressing concerns about Arctic drilling in the early 2000s. The ad features a sleeping sow polar bear with a small cub sleeping on her back. The caption paired with this image reassures the viewer that Phillips' business practices do not disturb the animals; in fact, it claims, "it's like we've never been there at all."



Phillips Oil advertisement c. 2000

Coca-Cola has used the polar bear as a lovable trade character since the 1920s in France, but the bears became truly iconic for the brand in the early 1990s with the launch of their television commercial, "Northern Lights." The animated commercial depicted a group of bears enjoying Coca-Cola and viewing the northern lights like a human family at the movies. "That's really what we were

trying to do," said the creator of the commercial Ken Stewart, "create a character that's innocent, fun and reflects the best attributes we like to call 'human'."[33]

In 2007, Coca-Cola aligned itself strategically with World Wildlife Fund (WWF) and pledged two million dollars toward WWF's conservation and wildlife research efforts over two years. To increase visibility of the partnership, Coca-Cola released a limited-edition beverage label featuring polar bears. An additional three million dollars in direct donations from Coca-Cola customers supplemented the funding to WWF.[34] Given the brand's estimated worth of $80 billion, critics charged that the company's pledge of two million dollars amounted to little more than greenwashing. A 2014 article from *The New Yorker* raised the question "Should the Polar Bear Still Sell Coca-Cola?" The author Mya Frazier explores the Coke bear's "unique cultural situation" as both a beloved trade character for one of the world's most iconic brands as well as a symbol for global climate change. "The cultural meaning of the animal is changing," Barbara Phillips, a researcher and professor of marketing at the University of Saskatchewan told Frazier in an interview for the article. "Polar bears aren't just cute white bears who drink Coke. There's this overlap between the advertising world and the real world. When people think of polar bears, they are thinking of a drowning polar bear—and that is not a happy polar bear."

Coca-Cola has since modified its partnership with WWF to focus on clean water initiatives. According to the company's website, the Coca-Cola Company and WWF partnership is focused on "helping to ensure healthy, resilient freshwater basins in the Mesoamerican Reef catchments [...] and the Yangze River basin in China" while "measurably improving environmental performance across the company's supply chain, integrating the value of nature into decision-making processes, and

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[33] Ted Ryan, "The Enduring History of Coca-Cola's Polar Bears," Coca-Cola, https://www.coca-colacompany.com/holidays/the-enduring-history-of-coca-colas-polar-bears.
[34] Mya Frazier, "Should the Polar Bear Still Sell Coca-Cola?," *The New Yorker*, November 6 2014.

convening influential partners to solve global environmental challenges."[35] The website features WWF conservation success stories, but does not explain exactly how the Coca-Cola company is involved outside of supposed monetary support.

The backlash against Coca-Cola's support of polar bear research highlights the politically contentious nature of the polar bear within the frame of global climate change and poses the question, would any amount of money have been enough? While monetary support of organizations working towards systemic change is undoubtedly valuable, the case of Coca-Cola and WWF raises the questions of how and if companies can financially support environmental efforts without being accused (guilty or not) of tokenistic gestures. Coca-Cola's conscious decision to move away from emphasizing politically and emotionally charged polar bear conservation reflects the motivations behind such sustainability partnerships: public image and revenue.

In a review of "Green Sentiments and the Human-Animal Relationship in Print Advertising During the 20th Century" conducted by marketing researchers Nancy Spears and Richard Germain, the authors note that as consumers expand their preferences for environmentally responsible brands, "it is imperative for marketers to identify practical ways to tap the commercial potential stemming from this environmentally sensitive zeitgeist in ways that do not overplay the green appeal."[36] Spears and Germain's study proposes a theoretical model based on positionality – the constantly evolving relationship between humans and other creatures - examining "the culturally understood position that humans hold in relation to animals and how this position adapts to ever-changing societal demands."[37]

The study concludes that "diminishing the centrality of humans and forwarding the inherent value of animals can focus consumers on environmentally friendly aspects of products."[38] This model

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[35] "About Us," http://wwfcocacolapartnership.com/.
[36] Nancy E. Spears and Richard Germain, "A Note on Green Sentiments and the Human-Animal Relationship in Print Advertising During the 20th Century," *Journal of Current Issues and Research in Advertising* 29, no. 2 (2007): 53.
[37] Ibid., 54.
[38] Ibid., 60.

is useful when examining how commercial marketing uses climate change narratives and the polar bear to sell products or to sell environmentalism. Similarly, the study concludes that showcasing society-focused values stirs customers to reflect on the environmentally supportive stance of the advertised product.

Thus, in the twenty-first century, environmental salvation is achieved through consumerism. While greater and greener market choices certainly constitute progress, critics argue that the focus on consumerism distracts from industry-wide solutions, perpetuates inequity, discourages the emergence of collective responsibility and undermines the likelihood of both collective grassroots changes and public pressure on governments to act. Given the bear's connection to beloved brands, toys, and commercial advertising, it could be argued that contemporary climate images of polar bears perpetuate limited environmental engagement through consumerism. Whether any images are capable of motivating actions beyond the influence of neoliberalism remains unclear.

Emotive Efficacy & Criticisms

Despite the polar bear's now iconic association with climate change, opinions within the communications literature differ as to the bear's efficacy as a tool for framing climate change impacts and spurring political action. Researchers raise concerns regarding the unintended consequences of using the polar bear as the first casualty of climate change. The pathos of a polar bear's plight might perpetuate the belief that climate change is happening elsewhere and need not be prioritized over other local or human concerns, as images that *reinforce* psychological distance *discourage* personal action.[39,40]

[39] Janet K. Swim and Brittany Bloodhart, "Portraying the Perils to Polar Bears: The Role of Empathic and Objective Perspective-Taking toward Animals in Climate Change Communication," *Environmental Communications* 9, no. 4 (2015).
[40] Elke Weber, "Experience-Based and Description-Based Perceptions of Long-Term Risk: Why Global Warming Does Not Scare Us (yet)," *Climate Change*, no. 77 (2006), https://link.springer.com/content/pdf/10.1007/s10584-006-9060-3.pdf.

Anthony Leiserorwitz notes in his report on climate change attitudes in the United States that messages about harm to animals in distant places like the Arctic can support the belief that "it's the polar bear's problem, not mine – and as long as it's not my problem, I frankly have more pressing things to worry about."[41] Researchers also warn that negative emotions, such as the fear often associated with species extinction, may backfire.[42] Framing the polar bear as doomed can result in fatalism and helplessness – a sense that human action to prevent climate change is useless. Negative emotions can also lead to disengagement, externalization of responsibility, and the blaming of others as a way of coping with one's own perceived inability to mitigate the danger posed by climate change.[43]

Saffron O'Neill, a geographer at the University of Exeter in the UK, has written extensively about visual images and climate change. In two separate studies, she examined the images published with climate change related articles in the United States, United Kingdom, and Australia. Her first study published in late 2012 analyzed the content and viewer engagement of 1,603 images published alongside media stories related to climate change in thirteen newspapers. The study asked viewers to rate how well an image communicated the importance of climate change and whether or not the viewer felt capable of doing something to help after viewing the image. The study overwhelmingly demonstrated that very few images, if any at all, can achieve both high saliency and efficacy. More often than not, the image achieved one at the expense of the other. Viewers found images of polar bears to communicate the *importance* of climate change well but were left feeling unable to effect immediate change. The pending plight of the bear was too far removed from "the everyday," in both spatial and temporal terms.[44]

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[41] Anthony Leiserorwitz, "American Opinions on Global Warming: A Yale University/Gallup/Clearvision Institute Poll," (2007), https://www.populationmedia.org/wp-content/uploads/2008/01/americansglobalwarmingreport.pdf.
[42] Manzo.
[43] O'Neill Saffron and Nicholson-Cole Sophie, "'Fear Won't Do It': Promoting Positive Engagement with Climate Change through Visual and Iconic Representations," *Science Communication* 30, no. 3 (2009).
[44] Saffron J. O'Neill et al., "On the Use of Imagery for Climate Change Engagement," *Global Environmental Change* 23, no. 3 (2013).

In her study from 2013, O'Neill expanded upon this content analysis. She emphasizes the role of visual framing in fostering public understanding – every image has a message. O'Neill concedes that viewers perceive images, especially photographs, as "speaking the truth." "They tell us," she wrote, "how we should feel."[45] Two dominant visual frames emerged in her review of climate change related images: "contested" visual frames and "distancing" visual frames.[46] According to O'Neill, "contested" frames portray climate change as a topic of debate, friction, or political discord. Images categorized as "contested" might include protesters or political figures in active debate. "Distancing" visual frames portray climate change as occurring far away from the everyday lives of readers. Images categorized as "distancing" include calving glaciers, changing sea ice, polar bears or other non-human nature. Top circulating newspapers (both in-print and online) predominantly published images that framed climate change as a contested or distant issue to their readership.[47]

Across the communications literature, emotional engagement and response dominate the discussion. In a study on empathic versus objective perspective-taking toward animals in climate change communication, authors Janet Swim and Brittany Bloodhart emphasize the motivational role of emotions in visual framing. The spur to action is often the heart and not the head, because "feelings have a greater impact than…the probability of risk on decision making."[48] The authors found that messages portraying polar bears harmed by climate change, when primed with an empathetic perspective like "imagine the fear of losing your home" or "the inability to find food," motivated greater financial support for environmental groups engaged in climate change activism from viewers. The authors found that empathetic framing activated hope in participants and did not create the negative or hopeless reaction that previously discussed authors warned against.

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[45] Saffron J. O'Neill, "Image Matters: Climate Change Imagery in Us, Uk and Australian Newspapers," *Geoforum* 49 (2013): 11.
[46] Ibid.
[47] Ibid.
[48] Swim and Bloodhart, 449.

Sociologist Kate Manzo in her essay, "Beyond Polar Bear? Re-envisioning climate change" reluctantly concedes the value of polar bear images for their ability to cause viewers to identify with the animal's plight ("the identifiable victim effect"), citing the role of "shock, sadness, and need in contemporary fundraising."[49] She argues, however, that images of the bear fail to convey wide ranging climate change impacts and leave viewers feeling helpless to effect change. Manzo, as well as other authors including Dunaway, raise concerns that polar bear imagery overlooks or distracts from the human dimensions and systemic inequity of climate change impacts. She concedes, however, that owing to the complexity, invisibility, and scope of the topic, no one image could adequately communicate its impacts to broad viewership.

Polar Bear as Cultural Myth

In addition to formal communications and psychology research, twentieth century modern and postmodern theorists provide valuable insights into the photographic image and the cultural norms these images implicitly communicate and compound. Susan Sontag in her book *On Photography* famously asserts that photographs are constructed images of reality to the same degree as paintings or drawings—that although the medium is often associated with veracity ("seeing is believing"), photography exemplifies the "usually shady commerce between art and truth."

Viewers bring their own experience and cultural groundings to a photograph. That is, they understand the photograph through the lenses of their own experiences and assumptions. What is present to us where we are? This is the pressing question facing those at the forefront of climate change communication and engagement. Climate change is nebulous and largely invisible. The plight of the polar bear – despite its charismatic appeal – is not present where the vast majority of the world's

[49] Manzo, 198.

population lives. Sontag, Berger and countless other cultural scholars propose that seeing does not represent an objective reality—we see what we want to see or what we know, what someone else wants us to see, or some combination of the two. In this sense, images of the polar bear are always selective; they can never be impartial or unbiased for their interpretation is culturally-based and always changing.

The French theorist Roland Barthes once explained that the seductive power of images lay in the way they assault our senses. He argued that "pictures, to be sure, are more imperative than writing, they impose meaning at one stroke, without analyzing or diluting it."[50] Images bypass the rational brain and communicate almost on a subconscious level. Sontag further elaborates on the powerful communicative effects of images, asserting that while the audiences of written accounts are inherently limited by language or complexity, a photograph "is destined potentially for all."[51]

Chapter Two presented a twentieth century history of the shifting public perceptions of polar bears in response to cultural and societal changes. The rise of industrial capitalism changed how Americans related to wildlife and the landscape. Popular imagery and advertising solidified the polar bear in the public imagination as a relatable friend and trade character. This use, and the ensuing anthropomorphizing of the polar bear, set the foundation for its rise and potent emotive effects as a climate symbol today. Industrialization mediated the polar bear's mythic meaning in American culture; the animal became a lovable commodity through the same process that today threatens its very survival.

The polar bear, given its contemporary political symbolism, calls for a lexis, as it exemplifies Barthes' definition of a "myth." Notably, myth for Barthes and other semioticians differs from demonstrable falsehood. In Barthes' usage, myths resemble extended metaphors—they help explain

[50] Roland Barthes, "Part Two: Myth Today," in *Mythologies* (New York: Hill and Wang, 1972), 219.
[51] Susan Sontag, *Regarding the Pain of Others* (New York: Farrar, Straus, and Giroux, 2003).

cultural experiences and are deeply rooted in historical and cultural context. Myths operate by naturalizing the cultural. They transform the dominant values, beliefs, feelings, and subjective norms of a culture into natural, universal, and commonplace truths.

Myths, according to Barthes, emerge and propagate through three orders of meaning: denotative, connotative and mythological. A photograph of a starving polar bear at a denotative level, is simply that: an image of a starving bear in its natural environment. At a connotative or emotional level, this bear represents to American audiences diminishing sea ice and a victim of global climate change. At a mythological level, the bear represents the political and cultural implications of industrialization and the modern lifestyles that have polluted the environment and generated a precarious and uncertain future for all of humanity.

Susan Sontag's extended meditation on images of war and violence in her book *Regarding the Pain of Others* offers a powerful warning that builds on the communications literature discussed above. She too explores the distancing effects of images and goes as far as to blame the emotion of sympathy for collective complacency: "So far as we feel sympathy, we feel we are not accomplices to what caused the suffering," she writes. "Our sympathy proclaims our innocence as well as our impotence. To that extent, it can be (for all our good intentions) an impertinent – if not an inappropriate – response. To set aside the sympathy we extend to others beset by war and murderous politics for a reflection on how our privileges are located on the same map as their suffering, and may – in ways we might prefer not to imagine – be linked to their suffering, as the wealth of some may imply the destitution of others, is a task for which painful, stirring images supply only an initial spark."[52]

Because images of the polar bear commonly prompt feelings of sympathy, they proclaim "our innocence as well as our impotence." Through our feelings of sympathy, we perceive absolution. Our perceived absolution demotivates "reflection on how our privileges are located on the same map as

[52] Ibid., 102-03.

their suffering" – it demotivates deeper reflection toward collective solutions. To remove ourselves from such an emotional response to reflect upon *our own* contributions to the plight of the polar bear proves a far more difficult task. Although the imagery may move us, it over simplifies and can lead to simple and woefully inadequate solutions.

As the previous chapters have demonstrated, the bear is a charismatic and relatable animal in American popular culture, so much so that we use it to advertise everything from soft drinks to outdoor gear. Bear photographs, and any other relatable images, can be effective in capturing people's attention, and to positive ends. In environmental messaging, depictions of the polar bear may provide the "initial spark" to reflect on the suffering of others (and potentially ourselves), but this connection with the bear provides no clear solution for its suffering. This lack of clarity creates an element of vulnerability of which stakeholders and marketers are keenly aware. They craft their messages to address consumer vulnerability – either to reassure through demonstrations of environmental care or to agitate and motivate through images of environmental threat. Consumers, therefore, should recognize the manipulative effects of environmental messaging, to avoid emotional responses and consider constructive action.

CONCLUSION

"We stood there crying – filming with tears rolling down our cheeks," Paul Nicklen told *National Geographic* after encountering a starving polar bear in late summer on Somerset Island in the Canadian Arctic.[1] Nicklen is a nature photographer and the co-founder of Sea Legacy, a non-profit collective of photographers that uses "imagery to convert apathy into action and to bring about powerful conservation wins."[2] Nicklen shared the videos and still shots on social media with a long caption describing the pains of starvation and connecting this bear's suffering to our own inaction. "We must reduce our carbon footprint," he wrote, "eat the right food, stop cutting down our forests, and begin putting Earth – our home – first." The powerful footage with its mournful soundtrack has since been viewed over 1.7 million times, according to Instagram's site metrics. "It's a soul-crushing scene that still haunts me," he wrote to his followers, "but I know we need to share both the beautiful and the heartbreaking if we are going to break down the walls of apathy."

In a telephone interview with the *Washington Post*, Nicklen conceded that he had no definitive proof that the bear's condition was connected to global climate change. He told reporters that he wanted to show people what a starving bear looked like and let them draw their own conclusions.[3] "We are a visual species," Nicklen told the *Post*. "Why he was dying, I don't know."

And draw their own conclusions, they did.

The outpouring in response to Nicklen's footage demonstrates how advertisers, politicians, and other image-makers craft visual messages to elicit specific and timely emotional responses from viewers. Nicklen did not tell his viewers what to think, but rather showed them how *to feel* about these

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[1] Sarah Gibbens, "Heart-Wrenching Video Shows Starving Polar Bear on Iceless Land," National Geographic, https://news.nationalgeographic.com/2017/12/polar-bear-starving-arctic-sea-ice-melt-climate-change-spd/.
[2] "About Us," SeaLegacy, https://www.sealegacy.org/about-us.
[3] Eli Rosenberg, "'We Stood There Crying': Emaciated Polar Bear Seen in 'Gut-Wrenching' Video and Photos," Washington Post, https://www.washingtonpost.com/news/animalia/wp/2017/12/09/we-stood-there-crying-the-story-behind-the-emotional-video-of-a-starving-polar-bear/?utm_term=.40e706fe9d47.

images and it is precisely this capacity that made them sell. News outlets across the world picked up the story. "The news media can't resist," wrote Margaret Wente in an editorial for *The Globe and Mail* "… at least one news outlet embellished the story by telling us that the bear 'struggles to find food across a barren landscape that should be covered in ice.' That's ridiculous," she said. "The bear is on the land. It is summer. That's what the tundra looks like in the summer."[4] Although Nicklen's team shot the footage in late summer, he waited until early December to share it publicly. The temporal error noted by Wente is an understandable mistake and could have resulted from standard delays in production, or perhaps it was purposeful on the part of Nicklen's film team.

Takeaways

Today, digital media inundate our senses. These images actively shape our opinions, beliefs and worldviews, oftentimes insidiously. Online engagement has tremendous informative and connective capabilities, but with more information and *misinformation* instantly available, stakeholders can easily create an environment of uncertainty around challenging issues like climate change. As opinion polls regarding the Arctic National Wildlife Refuge demonstrate, uncertainty causes citizens to be increasingly vulnerable to manipulative framing effects. Compounding this vulnerability, social media and advertising algorithms adjust frames instantaneously based on what an end-user selects. Just as users carefully cultivate their identities for a digital audience, so too do algorithms curate content specifically for these constructed identities and encourage clicks, shares, purchases, or monetary donations. Media platforms show us what we want to see and what advertisers want us to see, invisibly strengthening the seduction of our own confirmation biases.

[4] Margaret Wente, "The Starving Polar Bear Raises a Question: Is Fake News Okay for a Good Cause?," The Globe and Mail, https://www.theglobeandmail.com/opinion/is-fake-news-okay-if-the-cause-is-good/article37290997/.

Seeing does not represent an objective reality—we see what we know or want to see, what someone else wants us to see, or some combination thereof. In this sense, images like all stories, are always selective; they can never be impartial or unbiased. They have been crafted to tell specific stories to specific audiences. While the polar bear's story today warns us of impending climate impacts, it also illustrates the power of visual manipulation. An examination of the bear's story demonstrates how stakeholders conflate complex issues to black and white dualities, framing emotional depictions of survival or triumph to promote specific ideologies. Meanwhile, Arctic communities and environmentalists are increasingly rejecting the idea that a single starving polar bear can provide evidence for something as complex as climate change, just as the occurrence of fat bears cannot prove climate change is a hoax. Climate change can be real even as polar bears are healthy. The political, social, and cultural impacts of climate change cannot be packaged so neatly, and many Arctic communities view pervasive polar bear victim stories as distractions that collapse the complex realities of their everyday lives.

A photograph of a starving polar bear is simply that: an image of a starving predator in its natural environment. But on an emotional level, this bear represents suffering, diminishing sea ice and victimization from global climate change. At a mythological level, the bear represents the political and cultural implications of industrialization and the modern lifestyles that have polluted the environment and generated an uncertain future for all of humanity. This bear represents the impacts of Arctic drilling and carbon emissions, the Paris agreement and Kyoto Protocol. We identify with the bear and feel guilt for its plight, and yet feel powerless to help. The starving bear politicizes even as it distances. It conveys a mounting problem and an uncertain future. The very same image fifty years ago imparted an entirely different message. Only time will tell what the polar bear will mean fifty years from today.

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This thesis has shown how the polar bear – in its transition from ferocious to vulnerable, from a symbol of cold to a symbol of melt – illuminates the shifting historical perspectives of humanity's environmental responsibilities and the roots of divergent ideologies in the United States today. The rise of industrial capitalism changed how Americans related to wildlife and the landscape. Popular imagery and advertising solidified the polar bear in the public imagination as a relatable friend and trade character. This use, and the ensuing anthropomorphizing of the polar bear, set the foundation for its rise and emotive power as a climate symbol. The animal became a lovable commodity through the same process that threatens its survival today.

Although a wild polar bear has virtually no direct impact on the lives of Americans, we understand implicitly the bear's corporate and environmental associations that we encounter daily in the media. Herein lies the power of stories, visual or otherwise – that an animal so physically removed from our direct experience can convey ideological messages powerful enough to manipulate our worldview and decision-making. More broadly, however, this study demonstrates the influence visual narratives have on our conception and understanding of the world around us and the inherent value of evaluating media images critically.

Opportunities for Further Research

The use of the polar bear as climate victim will likely fade in the coming decades as Arctic communities continue to organize, advocate, and shift the dialogue to more human-centered narratives. Like the bear, these communities are experiencing disruption and relocation owing to climate change, and yet their plight has not garnered the same emotional public response and outcry that images of seemingly starving polar bears have. This imbalance of media coverage presents an avenue for expanded research and analysis. Should current climate models prove correct,

environmental changes will intensify, and concern for our own survival will supersede that for the bear's.

Furthermore, perceptions of the bear vary widely across the globe. The polar bear in Russia is a symbol of national strength and prowess. In the Svalbard archipelago, researchers view the bear as a dangerous and threatening nuisance. Even the United States' closest neighbors in Canada relate differently to the polar bear, as reflected in their hunting policies: though hunting is closely regulated, non-indigenous persons can legally sport hunt polar bears through Inuit guiding services.

Finally, peoples indigenous to the Arctic have cohabitated with the bear since time immemorial and hold deep understandings of the animal biologically, culturally and spiritually – understandings that continue to transform contemporary local policies. As this thesis focused on only dominant American perspectives of the polar bear, future research to include cross-cultural analysis of indigenous, pan-Arctic, and/or non-Arctic perspectives of the polar bear would greatly enrich our understanding of how symbols operate culturally and vary regionally - and what that may mean for the future of climate change communication and policy. How do mainstream images collapse or otherwise ignore more complex realities? It is possible for such images to do more harm than good to Arctic communities grappling with a changing climate? Are there *any* images that adequately and universally communicate the complexity and immediacy of climate change? Are such images even possible?

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